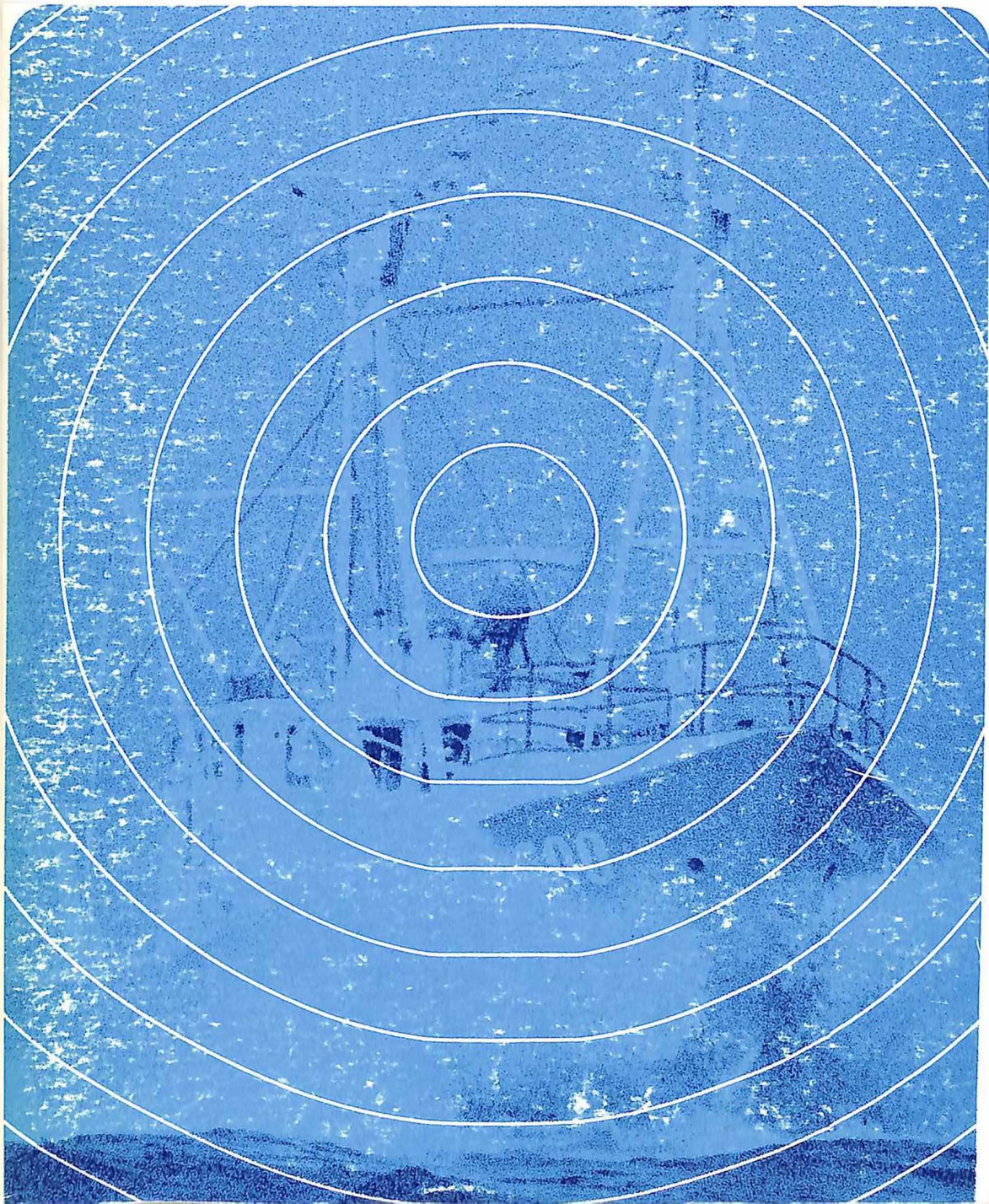


# Sea and Inland Fisheries Report for 1980

Report presented to the Government by the Minister for  
Fisheries and Forestry and laid before both houses of the Oireachtas.





**SEA AND INLAND**

**FISHERIES**

**REPORT FOR**

**1980**

**AN ROINN IASCAIGH AGUS FORAOISEACHTA**  
(Department of Fisheries and Forestry)

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**DUBLIN :**  
**PUBLISHED BY THE STATIONERY OFFICE.**

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**(Pl. 314)**

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# REPORT

OF THE

## MINISTER FOR FISHERIES AND FORESTRY

ON THE

## SEA AND INLAND FISHERIES

FOR THE YEAR

### 1980

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Line 18 should read

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## PART I.

## SEA FISHERIES

In 1980 the total value of all sea-fish (excluding salmon) landings by Irish registered vessels amounted to IR£35.5m., an increase of IR£8.5m. or 31% on 1979, of which amount IR£28.9m. relates to landings at Irish ports.

The total volume of sea-fish (excluding salmon) landings amounted to 144,000 tonnes of which 135,000 tonnes—almost double the 1975 figure—were landed at Irish ports.

The weights and values of annual landings of sea-fish (excluding salmon) at Irish ports by Irish registered vessels since 1971 are set out in the following table:-

TABLE 1

Year	Tonnes	IR£'000
1980	134,886	28,866
1979	85,697	24,905
1978	93,689	22,669
1977	82,488	18,689
1976	80,663	12,864
1975	76,262	9,135
1974	84,651	8,736
1973	85,703	7,464
1972	86,415	5,316
1971	72,568	4,238

Details of quantities and values of the different varieties of sea fish and shellfish landed in 1979 and 1980 are given in appendix No. 1. The average price per tonne obtained for each variety of sea fish (other than shellfish) from 1972 onwards is shown in appendix No. 2.



The leading ten fishing ports of 1980 in order of value of fish landed were: Killybegs, Howth, Rossaveel, Dunmore East, Castletownbere, Fenit, Galway, Clogherhead, Skerries and Burtonport.

### *DEMERSAL FISHERY*

At 27,231 tonnes, the total landings of demersal fish showed an increase of 6,139 tonnes or 29%. Landings of whiting increased by 3,868 tonnes or 47% while landings of monkfish showed the largest percentage increase of all demersal species increasing by 166 tonnes or 103%. Whiting was the species caught in the greatest quantity and was followed by Cod, Saithe, Plaice and Ray/Skate in that order. The total value of the demersal fish catch increased by 9% from IR£7.7m. in 1979 to IR£8.4m. in 1980. Cod was first in terms of cash earnings followed by whiting, plaice, sole and saithe. These five varieties contributed 79% of the total value of the demersal catch.

The overall average price of all demersal fish landed in 1980 was IR£308 per tonne compared with IR£366 per tonne in 1979. The total quantity, value and average value per tonne of landings of demersal fish for each year since 1971 are shown in the following table:-

TABLE 2

Year	Quantity Tonnes	Value IR£'000	Average Value per tonne IR£
1980	27,231	8,398	308
1979	21,100	7,721	366
1978	17,900	5,862	327
1977	18,900	5,709	302
1976	23,800	4,652	195
1975	20,000	2,881	144
1974	19,500	2,527	129
1973	20,400	2,374	117
1972	17,100	1,568	92
1971	20,700	1,590	77

### *PELAGIC FISHERY*

The total pelagic catch of 96,941 tonnes was 43,448 tonnes or 81% higher than the figure for 1979. The total value of the

catch was IR£14.3m. representing an increase of IR£4.5m. or 46%.

### *Herrings*

Landings of herrings amounted to 36,800 tonnes valued at IR£9.4m. compared with 27,383 tonnes valued at IR£7.9m. in 1979. The average price fell to IR£255 per tonne in 1979. The highest herring landings were registered at Killybegs and Rossaveel.

Exports of fresh, chilled or frozen herrings in 1980 amounted to 16,866 tonnes valued at IR£8,651,000 as compared with 9,643 tonnes valued at IR£5,272,000 in 1979. The quantity exported in salted and smoked forms was 10,036 tonnes valued at IR£5,702,000 as compared with 8,716 tonnes valued at IR£5,256,000 in 1979. A further 813 tonnes of herrings valued at IR£920,000 was exported in prepared or preserved form. The total herring exports of 27,715 tonnes valued at IR£15,273,000 represented an increase of 46% in quantity and 35% in value.

The Netherlands proved to be the biggest market for herring exports, having purchased 9,520 tonnes valued at IR£4,834,905. Germany was next having purchased 6,922 tonnes valued at IR£4,820,404 followed by Great Britain, France and Northern Ireland. The following table shows the total quantity, value and average value per tonne of herrings for each year since 1971:-

TABLE 3

Year	Quantity Tonnes	Value IR£'000	Average Value per tonne IR£
1980	36,800	9,395	255
1979	27,400	7,863	287
1978	27,700	8,171	295
1977	23,100	6,033	261
1976	22,000	3,133	142
1975	28,800	3,232	112
1974	39,600	3,950	100
1973	38,900	2,802	72
1972	47,800	2,116	44
1971	31,300	1,163	37

### *Sprats*

Landings of sprats increased from 1,892 tonnes in 1979 to

9,350 tonnes in 1980, an increase of 394% while the value of the catch rose from IR£128,000 to IR£705,000, an increase of 452%. The following Table shows the total quantity, value and average value per tonne of sprats for each year since 1971.

TABLE 4

Year	Quantity Tonnes	Value IR£'000	Average Value per tonne IR£
1980	9,350	705	75
1979	1,892	128	68
1978	9,119	342	38
1977	6,055	199	33
1976	8,576	218	25
1975	3,516	59	17
1974	7,314	139	19
1973	7,642	133	17
1972	5,845	65	11
1971	5,531	60	11

### Mackerel

Landings of mackerel showed an increase in 1980, rising from 24,217 tonnes valued at IR£1,792,000 in 1979 to 50,791 tonnes valued at IR£4,225,600 in 1980. The average price increased to IR£83 per tonne as against IR£74 per tonne in 1979. The highest mackerel landings were registered at Killybegs and Burtonport. The following table shows the quantity, value and average value per tonne of mackerel since 1971.

TABLE 5

Year	Quantity Tonnes	Value IR£'000	Average Value per tonne IR£
1980	50,791	4,226	83
1979	24,217	1,792	74
1978	27,507	1,720	63
1977	22,695	1,748	77
1976	14,394	877	61
1975	13,354	584	44
1974	8,525	365	43
1973	8,314	381	46
1972	4,592	147	32
1971	3,105	118	38

### SHELLFISH

The value of the shellfish catch at IR£6.1m. showed a decrease of IR£1.3m. on the value of the 1979 catch. Landings of mussels increased from 2,939 tonnes in 1979 to 4,557 tonnes in 1980 with a consequent increase in value from IR£0.2m. to IR£0.3m.

The value of shellfish landings over the past ten years are given in the following table:-

TABLE 6

Year	IR£'000
1980	6,143
1979	7,334
1978	6,526
1977	4,936
1976	3,886
1975	2,374
1974	1,754
1973	1,773
1972	1,417
1971	1,308

### EXPORTS

At IR£41m. exports of fish and fish products, including both sea and fresh water preparations (See Part II of this Report) established a new record. Exports of sea fish and fishery products were valued at IR£36.8m. as against IR£28.7m. for 1979. Details of exports are given in appendix No. 4.

### PERSONNEL AND VESSELS

The number of fishermen engaged full time rose from 3,299 in 1979 to 3,485 in 1980 while the number of part time fishermen fell from 5,412 in 1979 to 5,339 in 1980. There was an overall increase in the number of vessels engaged in fishing in 1980 the total being 3,067 compared with 2,965 in 1979. A further increase occurred in the number of vessels over 75 gross tons in the fleet, the total being 115 as compared with 94 in 1979. The number of motor fishing vessels over 25 g.r.t. which are responsible for most of the wetfish catch



rose from 351 in 1979 to 379 in 1980 while the number of motor vessels under 25 g.r.t. rose from 1,188 in 1979 to 1,237 in 1980.

### *MARICULTURE*

Great interest has developed in aquaculture in Ireland in recent years, particularly in relation to mariculture, with the emphasis on oyster and mussel cultivation. The culture of marine species such as oysters and mussels is a relatively new technology, and although they have been raised artificially for many years, the application of new methods of culture or cultivation in new areas requires a period of testing and evaluation before success can be assured.

The Fisheries Act, 1980 has revised and simplified what was a cumbersome legal procedure and under that Act aquaculture has been broadened to include the culture of any species of fish, aquatic invertebrate animals of whatever habitat or aquatic form of any food which is suitable for the nutrition of fish. The Act will also make it possible to designate whole areas as being suitable for mariculture, and within these areas to issue licences to individuals or groups, thus allowing for more orderly development.

E.E.C. grants continued to be available towards the cost of mariculture projects. An Bord Iascaigh Mhara operated a National Mariculture Grants Scheme, which covered both pilot and commercial scale projects.

Technical and engineering advice and assistance continued to be given to various private developers of salmonid and shellfish rearing stations.

There has been a significant increase in the number of applications for licences for the cultivation of oysters and mussels, and this is an indication of the increasing interest in mariculture in Ireland.

### *AN BORD IASCAIGH MHARA*

The Board received from the Fisheries Vote for the year ending 31st December, 1980 a grant of IR£8,822,701 in aid of administration and current and capital development. Repayable advances totalling IR£2,304,000 were also made to the Board from the Central Fund, mainly for the provision of boats and gear.

The Scheme of loans, grants and leasing arrangements for the acquisition of sea fishing boats and gear continued in 1980. During the year, four new steel vessels in excess of 90ft costing IR£8,577,740 and eleven new vessels ranging in size from 64ft to 90ft with a total value of IR£9,596,583, joined the fleet. Nine of these vessels were built in Irish yards. Thirteen vessels in these larger size ranges were on order at the end of 1980, twelve of which have been placed with Irish yards. Forty new vessels under 50ft, valued at IR£1,472,744 and all Irish built, also joined the fleet during the year. Twenty vessels in this class were on order with Irish builders at the end of 1980.

The Board's export market development policy continued to concentrate on achieving added value through the expansion of processing activities.

The development programme at the National Fishery Training Centre accelerated during the year with a large complement of new equipment for teaching purposes including a 600 H.P. engine similar to that on large trawlers, donated by Stork Werkspoor of Holland, and a Decca Navigator Simulator. Construction work commenced on a purpose designed net - loft and dry land trawler deck.

A new 40ft Mobile Training Unit was acquired to expand the education and training programme by providing short intensive courses for fishermen in their home ports. Courses in skipper training, chartwork and seamanship, net mending, safety at sea, handling and care of catch and pre-employment courses were organised for fishermen at numerous ports throughout the country. Thirty-eight fishermen attended courses organised by An Bord Iascaigh Mhara and run in conjunction with the White Fish Authority in Hull and on their Mobile Training Unit at Whitehaven and Fleetwood.

The Board's Annual Report on its activities in 1980 is published separately.

#### *FISHERIES AND OCEANOGRAPHIC RESEARCH VESSEL*

The Department has an ongoing requirement for a research vessel capable of operational flexibility in a number of different but specialised roles relating to biological, environmental and oceanographic research. The Nansen-class vessel design produced by the Norwegian shipbuilding firm A.S. Mjøllem and Karlsen was selected as the most suitable for Irish requirements and the firm licensed the Minister for Fisheries and Forestry to have the proposed vessel built in an Irish shipyard.

The Government decided at a meeting on 30th July, 1980 that the research vessel would be built in Verolme Cork Dockyard and negotiations with the yard regarding the formulation of a building contract for the vessel were in progress at the end of the year.

### *SEA FISHERIES PROTECTION*

Arising from regular fishery protection patrols by the Naval Service, aided by Air Corps Surveillance, prosecutions were instituted against the skippers of 30 foreign vessels and 18 Irish vessels who were charged with various offences under the Fisheries Acts including illegal entry, illegal fishing, having undersized fish or illegal nets on board. Of these cases, 7 were unsuccessful due to lack of sufficient evidence or dismissal on technical grounds, one resulted in a fine of £2,000 for illegal herring fishing by an Irish skipper and the remaining cases were still subjudice by the end of the year.

The co-operation of the Naval Service and the Garda Síochána which was readily available in the enforcement of fishery protection measures and the conduct of court cases is gratefully acknowledged.

On the 14 October, 1980, the European Court of Justice delivered its judgement in regard to a referral by the Cork Circuit Court in the case of the Attorney General v. Juan C. Burgoa (skipper of the Spanish Fishing vessel "Itxas Ondo"). The defendant was charged with unlawful fishing within the exclusive fishery limits of the State soon after the passing of the Fisheries (Amendment) Act, 1978 which greatly increased the penalties for such offences. The Circuit Court subsequently referred the case to the European Court of Justice for a preliminary ruling on a number of legal questions concerning possible rights of Spanish fishing vessels under Article 234 of the EEC Treaty to fish within the exclusive fishery limits of the State, having regard to the rights which these vessels had traditionally enjoyed between 6 and 12 miles from the Irish coast under the London Convention on Fisheries of 1964. As a result of this referral, a number of Circuit Court hearings in respect of similar charges against Spanish fishing vessels were adjourned pending the European Court Ruling in the Burgoa case. The Court of Justice held that although Article 234 paragraph (1) of the EEC Treaty applies to the London Fisheries Convention of 1964, that Article of the Treaty does not confer upon individuals who wish to rely upon a Convention to which it applies rights which the national Courts must protect; and that legislation of a Member State (in this case, Ireland) prescribing penalties for a contravention of the prohibition against

fishing without authorisation in its fishing limits, which is imposed on Spanish vessels by Council Regulation 1376/78, is not incompatible with Community law. This decision effectively upheld Ireland's position in the prosecution of Spanish fishing vessels for any fishing offences within the Irish fishery zone in contravention of EEC Regulations. As a result, the way was clear for the Courts to deal with the backlog of Spanish cases and the decision provides a precedent for future cases.

## *EUROPEAN ECONOMIC COMMUNITY*

### *Common Fisheries Policy*

Negotiations on the revision of the Common Fisheries Policy continued throughout the year under review with a total of six meetings of the EEC Council of Fisheries Ministers being held in all. While no definite agreement was reached by the Council on a Common Fisheries Policy substantive progress was made on some important elements of Community fishing policy.

At the Council meeting held on 29th January, 1980 a consensus was reached on the total allowable catches proposed by the EEC Commission on the basis of scientific advice. A regulation (no. 754/80) giving effect to this agreement was adopted by Council on 26th March, 1980. Detailed rules proposed by the Commission for implementing a community system for recording and notification of information on catches taken by Member State fishing vessels were also agreed to. Only species for which a total allowable catch has been fixed are subject to the rules which were effected by regulation No. 753/80 adopted by Council on 26th March, 1980.

On 30th May, 1980 the Council of Foreign Affairs Ministers made a declaration on the Common Fisheries Policy undertaking to adopt the decisions necessary to ensure that such a policy was put into effect at the latest on 1st January, 1981.

In the light of this declaration the Fisheries Council met on the 16th June, 1980 and discussed various aspects of fisheries policy. Discussions centred on a Commission paper setting out criteria for establishing Member State's quotas. This document provided for the commitment embodied in the Council Resolution of 3rd November, 1976 (the Hague Agreement) to double the Irish catch between 1975 and 1979. The Council noted the Commission's intention to produce proposals on quotas for consideration at the next Council meeting.

On 21st July the Fisheries Council resumed again and dis-

cussions were held with particular reference to outstanding questions on the conservation of fishery resources, catch quotas for 1980, structural policy measures and access arrangements.

On the technical conservation measures the Council made progress towards reaching a consensus on the mesh sizes of nets for various fish species. The Council undertook a preliminary examination of the Commission proposals on catch quotas for 1980 and also on a Commission Communication on access arrangements and fishing plans. Commission proposals on structural policy were noted by the Council but were not discussed in substance.

On 30th September, 1980 the Fisheries Council met and recorded its agreement to the regulation on technical conservation measures. The technical measures as laid down specify inter alia net mesh sizes, by-catch rates and fish sizes permitted as well as the limitation of fishing within certain areas and periods and with certain types of gear or boats. The Council agreed that this specific aspect of the Common Fisheries Policy would apply provisionally between 1st October and 20th December, 1980 pending finalisation of the whole policy. A Regulation effecting this agreement was immediately adopted by the Council (No. 2527/80).

At the Fisheries Council on 28th October, 1980 there was a wide-ranging discussion on a number of points concerning the formulation of the Common Fisheries Policy. The Council identified the basic areas of disagreement in the allocation of catch quotas for 1980 and conscious of the declaration of 30th May, 1980 that a Common Fisheries Policy be put into effect by 1st January, 1981, decided to set up a high level working group to try to reach agreement on this issue. The Commission's proposals on structural policy were discussed and broadly welcomed together with a Commission Communication to the Council setting down guidelines for the review of the market organisation in fishery products. In addition, the Council reached agreement in principle on the terms of a Regulation establishing certain supervisory measures for fishing activities by vessels of Member States. In particular, the Regulation lays down procedures for the verification of catches in order to ensure that limits fixed for permissible levels of fishing are observed. The Fisheries Council met again on 17th and 18th November, 1980 and while a thorough discussion was held on the distribution of catch quotas for 1980 and related issues including access to fishing zones no substantial progress was made.

The final Fisheries Council in 1980 was held on 15th, 16th

and 17th December, 1980. Ministers made strenuous efforts to reach agreement on the contentious issues of quota distribution and access arrangements but again met with little success.

Interim measures on the conduct of Member States fishery activities had applied consistently during 1980. These measures obliged Member States to conduct their fishing activities in such a manner so as to respect the agreed total allowable catches for 1980 and it was envisaged that catches taken would be offset against any quotas fixed by the Council for 1980. As negotiations on the Common Fishery Policy were scheduled to resume in January, 1981 these interim measures and the period of validity of the Regulation on technical conservation measures were both further extended from 20th December, 1980 to the end of January, 1981.

#### *Arrangements with Third Countries*

Framework Fisheries Agreements were signed and concluded during the period under review between the Community and the Governments of Sweden, Senegal, Guinea-Bissau, Norway and the Home Government of the Faroes.

Spain is the third country of greatest relevance to the extended Irish 200 mile exclusive fishery limit insofar as significant fishing activity is concerned. The Framework Fisheries Agreement negotiated between the Community and Spain was signed by the Community on 15th April, 1980 and concluded on 25th November, 1980. The fishing arrangements which applied to Spanish vessels in 1980, following consultations between the Community and Spain under the procedure laid down in the Agreement, effectively prohibited Spanish vessels from fishing in a specified area of Irish waters which at no point is less than 50 miles from the Irish coast.

A draft Framework Fisheries Agreement between the Community and Canada was initialled on 29th November, 1980. The Agreement provides for a degree of continued access to Canadian waters by Community fishermen in return for tariff concessions on imports of certain specified fishery products from Canada. The Minister for Fisheries and Forestry, Mr. P. Power T.D., linked any acceptance by Ireland of the draft Agreement to a clear indication of the Council's intention to adopt improved Regulations to protect Community fish markets.

#### *Cross Border Herring Study*

The completion of the cross border study on Mourne herring

was announced by the Minister for Fisheries and Forestry Mr. P. Power T.D. on 28th May, 1980.

The study which was initiated in late 1978 was trilaterally commissioned and financed by the Irish and United Kingdom Governments and the EEC Commission as a cross-border project. Its primary objective was to provide scientific data on the juvenile herring stocks supporting the Mourne herring fishery from which future fisheries management and related socio-economic policies can be formulated.

The study was carried out by Fisheries Development Ltd., London at a total cost of £126,000 shared on a trilateral basis by the EEC Commission (50%) and the Irish (25%) and United Kingdom (25%) governments.

*Study on the Development of the Irish Sea Fishing Industry and its regional implications*

The study was completed and published by the Economic and Social Research Institute in July, 1980 at a cost of IR£80,000. It was initiated in June, 1978 having been jointly Commissioned and financed by the Irish Government and the EEC Commission.

The purpose of the study was to examine the structure and dimensions of the Irish sea fishing industry, to determine the constraints on its expansion, to define the elements of a programme for optimal use of marine fish resources and to identify priority projects, programmes and policy alternatives.

It represents an essential step in the elaboration of an updated fisheries development programme.

*EEC aid for restructuring the Inshore Fishing Industry*

Under the 1980 EEC Scheme of FEOGA (European Agricultural Guidance and Guarantee Fund) grants for the inshore fishing industry Irish investment projects comprising the construction of twelve new fishing vessels, modernisation of two existing vessels and four aquaculture projects were approved by the EEC Commission for grant aid amounting to IR£2,671,574.

The grants awarded to Ireland represents approximately 19% of the total FEOGA aid allocated for division between the Member States of the Community.



## RESEARCH AND DEVELOPMENT

### PELAGIC FISHERIES

Catches taken in all the major fisheries continued to be monitored in 1980. Assessments were carried out and scientific recommendations made in the way described in the Department's Annual Report for 1979 (P. 14).

#### *Herring*

The stock of herring in the Celtic Sea remained at a low level during 1980. Surveys of larval abundance, carried out by the Department scientists working from chartered fishing vessels, indicated that the level of spawning stock biomass had not changed from that of the previous year. The prohibition for herring fishing in the Celtic Sea therefore remained in force.

A restriction on the quantity of herrings that may be taken off the south west coast (ICES sub. div. VII j) was (6,000 tonnes) again in operation in 1980. The stock in this area is not capable of sustaining a major fishery, although it does not appear to be in a depleted state. The herring fishery off the west coast (ICES div. VII b) is likewise subject to a precautionary restriction on catches (7,000 tonnes). This fishery is closely linked with the Donegal coast fishery (ICES div. VI a) which remained closed in 1980 to allow the recovery, apparent in that stock in 1979, to continue. The latest information available from larval surveys and from examination of the age distributions of the catches confirms that the welcome trend in spawning stock biomass appears to have been maintained.

The ban on herring fishing within 12 miles of the coast in the Irish Sea was continued in 1980.

This ban, together with the restriction on the total catches of Manx and Mourne herring, was intended to bring about an increase in the total stock biomass. The latest information, however, indicates that the decline in the Manx stock has accelerated and a further decrease in the total allowable catch appears likely. On the other hand there has been a small increase in the size of the Mourne stock. This has been largely due to the closure of the industrial fishery in the Irish Sea which has resulted in an increase in recruitment to the Mourne stock. A young herring survey carried out in February in the Irish Sea was the second one in a series designed to estimate the abundance of young herring in the area.

### *Sprat*

Samples of sprat were obtained and analysed during the year from catches made along the south coast and at Galway. A considerable fishery developed at Galway in the latter part of 1980, but fishing along the south coast was generally disappointing. Larval surveys were again carried out in the Celtic Sea in order to estimate the size of the parent stock.

### *Mackerel*

Sampling of catches was intensified during 1980 because of the increased fishing activity along the north western and western coasts. There have been signs that recruitment of the 1977 year class to this fishery has been very low and this together with the very high catches in recent years would suggest that this fishery will be severely curtailed in the near future. The latest information indicates that there has been a considerable decline in the adult stock. A mackerel egg and larval survey was undertaken in the Celtic Sea during 1980 as part of an international survey.

### *Fat Content*

Fat content of herring, mackerel and sprat were estimated continuously throughout the year on behalf of exporters and people in the trade.

## *DEMERSAL FISHERIES*

Throughout 1980, the port sampling programme continued to monitor the state of the stocks of which the fisheries for cod, haddock, whiting and plaice are based. The twice-yearly surveys of young plaice in the Irish Sea which commenced in 1975 were also maintained. The results of all these investigations are used to calculate trends in stock biomass, the commercial strength of the recruiting brood of each year and the annual levels of fishing mortality being exerted on the stocks. These assessments are carried out every year by the Department's scientists of the Fisheries Research Centre, who work in co-operation with scientists of the national fisheries laboratories of other countries so that a complete picture is obtained of each stock as an entity.

During 1979, increased levels of recruitment appear to have occurred in the cod stock off the north-west coast and in the plaice, cod and whiting stocks in the Irish Sea. There are also

indications that recruitment to the north-west haddock and whiting stocks was above average during 1980. Nevertheless, all these stocks are currently being exploited too heavily for the maximum yield per recruit to be obtained, and at a level of intensity at which catch rates (i.e. catch per hour, or per day) are significantly lower than they could be if total fishing pressure was reduced. The present high levels of exploitation of our "traditional" demersal stocks means that the profitability of these fisheries is correspondingly low.

The stocks of black sole in the Irish Sea and Celtic Sea, on the other hand, are being fished at optimum intensity.

## *SHELLFISH*

### *Lobsters*

During the summer of 1980, samples of lobsters were taken from holding ponds round the coast to investigate the possible incidence of *Gaffkaemia*, but the bacteria which causes this disease was not found in any of the lobsters examined. Also during the year, the results of the lobster tagging experiments which have been carried out by the Department at Kilmore Quay for several years were analysed in order to obtain information on stock structure and changes in abundance. The results are being prepared for publication.

### *Nephrops*

In 1980, work continued into the development of an improved technique for determining the age of *Nephrops* (the Dublin Bay prawn) in order to more accurately assess the population structure and hence the annual trends in mortality and stock size.

### *Mussels and Oysters*

The Department's scientific staff continued to investigate and advise on the development of these resources at various localities, most notably Clew Bay, Killary Harbour, Galway Bay, Tralee Bay, Castlemaine Harbour, Kenmare Bay and Wexford Harbour.

## *RARE FISHES*

The Fisheries Research Centre continues to provide a service

## SHELLFISH

Dept. Report, 1981

### *Nephrops*,

Scientists at the Fisheries Research Centre took part in an international investigation (funded by the European Commission) of the escape of *Nephrops* from the trawl. Fisheries biologists from France (Institute Scientifique et Technique des Pêches Maritimes) and fishing gear technologists from Scotland (DAFS Marine Laboratory, Aberdeen) were joint participants. Another part of this EEC project included a study of the by-catch in the French *Nephrops* fishery off the south coast, in which scientists from both the Fisheries Research Centre and Institute Scientifiques et Techniques des Pêches Maritimes took part.

Towards the end of 1981, the Fisheries Research Centre undertook further research into the escape of *Nephrops* through different parts of the trawl.

## SHELLFISH

Dept. Report, 1982

### *Nephrops*

Further experiments on *Nephrops* trawl design were carried out by the Department's Fisheries Research Centre in 1982, this time with

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the rear-end of the trawl divided into upper and lower components of different mesh size with the objective of avoiding large by-catches of juvenile whiting. The interim results were promising.

A survey of the abundance of *Nephrops* larvae in the Irish Sea was made jointly with the Fisheries Laboratory of the UK Ministry of Agriculture, Fisheries and Food in order to estimate the size of the spawning stock of *Nephrops*. The results indicated this to be in the range of 5,000-8,000 tonnes of females. Uncertainties about the sex ratio prevents the calculation of an overall spawning stock size at this juncture. It must be noted that commercial catches of *Nephrops* consist overwhelmingly of males, because breeding females have a generally low availability to capture by the trawl.

for examining and identifying specimens of rare and unusual fish. Small cash awards are paid to senders of rare species and an annotated list is published annually in the "Irish Naturalists Journal". Suitable specimens are preserved in the National Museum and many of these are on display.

## MARINE POLLUTION AND ENVIRONMENT QUALITY

### *Betelgeuse Disaster*

As a follow up to the investigations described in the Annual Report for 1979, plankton surveys and oceanographic studies were carried out in Bantry Bay during 1980. The results confirmed that no biological damage to the stocks of fish or shellfish resulted from the disaster or from the subsequent clean-up.

Analysis of samples of scallops collected by the Department's Diving Team showed that contamination by oil was slight and very localised.

### *Red Tides*

While a bloom of the microscopic planktonic organism *Gyrodinium aureolum* occurred again on the south-west coast in 1980, it was not as serious as the blooms of 1978 and 1979 and no fish kills resulted. A localised bloom of a different species (*Prorocentrum micans*) appeared on the north Clare coast. The extent and duration of these blooms is determined by oceanographic and meteorological conditions, and although no control as such can be exercised over their occurrence, the Department monitors the marine environment every summer, in order to study the phenomenon further and to provide some degree of warning to fish farmers whose stock is likely to be at risk. In 1980, this monitoring was extended to include the routine examination of mussel samples from various coastal regions for the presence of the toxin which can be produced by some of these red tide organisms. Most of the results were negative, and the few which were positive showed only very low levels of toxin – well below the accepted safety levels.

### *Industrial Pollution Control*

The Department continued to play an active role in the protection of the marine environment in each of the following areas:

- (I) Provision of Scientific advice to local authorities in the formulation of licences permitting effluent discharges to marine and estuarine waters from land-based sources.
- (II) Monitoring of both marine dumpsites and Coastal Waters generally to fulfill various national and international obligations.
- (III) Provision of technical and scientific advice to Department of Transport in the licensing of foreshore activities.

## MARICULTURE

The Department's research programme on scallop continued at two main centres, Lough Hyne in Co. Cork and in Mulroy Bay in Co. Donegal. At the latter, the enormous spatfall in the the North Water seen in 1979 was not repeated; the abundance of young scallop in the collectors in 1980, while still significant, was only about 5% of that observed the previous year. The 1980 programme included the determination of the size of the North Water adult scallop population by diving; this was assessed at just over 500,000 individuals. A survey of bottom types and benthic (i.e. bottom-dwelling) communities in the North Water was carried out by the Department's Aquatic Environment Unit, and automatic recording current meters were deployed at two locations in the North Water to obtain information on the water circulation patterns. These meters also record temperature and salinity (as well as current speed and direction) on magnetic tape every ten minutes, over a three-month period.

The Lough Hyne work in 1980 concentrated on monitoring the scallops which had been reseeded from Dunmanus Bay, continuing the investigations on the forced spawning of adult scallops and relating the levels of natural spatfall in the Lough to oceanographic conditions. A reseedling experiment using Mulroy scallops was also carried out in Bantry Bay.

As part of the Department's programme on mussel culture, recording current meters were placed in Killary Harbour and in Castlemaine Harbour in order to help assess the potential for mariculture development in these areas.

## FISH PATHOLOGY UNIT

During 1980, the Department took over the provision of a diagnostic service to the national fish farming industry by the establishment of a Fish Pathology Unit (FPU) at the Fisheries

Research Centre. This was previously carried out by the Department of Agriculture at the Veterinary Research Laboratory. The unit is staffed by a Fish Pathologist and three laboratory technicians. While the principle function of the FPU will continue to be the diagnosis and treatment of diseases and parasites of fish farm stock, future work will include research on the incidence of various pathological conditions in wild stocks and their possible relationship to environmental conditions.

#### FOREIGN RESEARCH VESSEL CRUISES

Members of the Department's scientific staff participated in cruises by the fisheries research vessels *Walther Herwig* and *Anton Dohrn* (Federal Republic of Germany) to investigate pelagic fish stocks around Ireland. *Cirolana* (United Kingdom) to survey mackerel egg distribution from the Porcupine Bank to the Bay of Biscay and *Thalassa* (France) to survey the abundance of young gadoids to the south-east of Ireland and to release tagged plaice off the south coast.

#### ENGINEERING FISHERY HARBOUR WORKS

##### Major Harbours

At Killybegs Fishery Harbour Centre expenditure of IR£285,877 was incurred on development works during the year. The works included reclamation work on the site for the syncrolift unit, the installation of a weighbridge and replacement of pier fenders. Work commenced on the construction of an auction hall and port offices.

At Castletownbere Fishery Harbour Centre expenditure on development works during the year was IR£472,159. Apart from the provision of an effluent disposal plant, for which tenders were received, work on the infrastructure of the industrial estate on Dinish Island was completed. Work on a 38KV electricity supply to the area continued. Construction of Stage I of the fish processing plant, on Dinish Island by Eiranova Fisheries Ltd., an Irish subsidiary of the Spanish firm Pescanova was completed. The syncrolift became fully operational.

At Howth Harbour IR£2,419,604 was spent on development works. Construction of the trawler breakwater and reclamation of foreshore on both sides of the west pier were completed. Dredging of the harbour approaches and the outer part of the fishery harbour was completed and excavation commenced inside a cofferdam to deepen the inner part of the fishery

harbour and to facilitate the construction in the dry of the Syncrolift basin and spending beach.

During the year the Fishery Harbour Centres Act, 1980 was enacted. This Act amends the Fishery Harbour Centres Act, 1968 so as to provide for a fishery harbour centre at Rossaveel, Co. Galway, instead of at Galway Harbour.

The Rossaveel Harbour Development Advisory Committee was set up by the Minister to recommend for consideration appropriate works in order of priority for the development of the infrastructure of Rossaveel Harbour.

##### Other Harbours, Ports and Landing Places

Other Fishery harbour improvement works, grant aided by the Department of Fisheries and Forestry were completed during the year at Bunagee in Co. Donegal, Frenchport in Co. Mayo, Oysterbed (Sneem) in Co. Kerry and Ballycrovane in Co. Cork. Fishery harbour works grant aided by the Department of Fisheries and Forestry were in progress at the end of the year at Dugort in Co. Mayo, Cahirciveen and Dromatoor in Co. Kerry and Oilean na gCaorach and Travarra in Co. Cork.

Improvement works which were recommended by the Department of Fisheries and Forestry and financed by Roinn na Gaeltachta were completed during the year at Baile an Easa (Boring Survey) and Athartha in Co. Donegal, Caladh Mhagnuis and Carraigín an tSruitha in Co. Mayo, Sruffan in Co. Galway and Baile an Rannaigh in Co. Kerry. Improvement works which were recommended by the Department of Fisheries and Forestry and financed by Roinn na Gaeltachta were in progress at the end of the year at Bunbeg in Co. Donegal, Saulia in Co. Mayo, Cora Pointe, Inis Meain and Inis Oirr in Co. Galway and Rineen in Co. Kerry.

#### FISHERY RESEARCH STATIONS

Proposals for the provision of Fishery Research Stations at Ballyglass, Co. Mayo and Kinsale, Co. Cork were being examined. Plans for the provision of additional accommodation at Dunmore East Fishery Research Station were under consideration. A Fish Pathology Unit as an extension to the facilities at the Fishery Research Centre at Abbotstown was provided.



## TECHNOLOGY

### *Fish Quality Control*

During the year fish landings were supervised by the Fish Quality Officers to ensure compliance with the Department's Handling, Storage and Transport Regulations. Particular attention was paid to the size and freshness gradings of fish landed at Irish Ports and offered for sale at auctions to ensure compliance with EEC Council Regulation No. 103/76 of January 1976. These Officers were active in certifying that fish withdrawn from the market in respect of which the Producer's Organisation wished to claim EEC Compensation monies, had been properly graded and properly disposed of.

### INTERNATIONAL AND OTHER CONFERENCES

During the year the Department was represented at the following conferences committees and working groups etc.

#### *Abroad*

Statutory meeting of the International Council for the Exploration of the Sea (ICES) (Copenhagen) and the following ICES working groups, symposia and committees:

- Irish Sea and Bristol Channel Working Groups (Copenhagen)
- Advisory Committee on Fishery Management (Copenhagen)
- Dialogue Meetings (scientists and administrators) (Copenhagen)
- Working Group on the introduction on non-Indigenous Marine Organisms (Nantes)
- Herring Assessment Working Group for the Area South of 62°N (Copenhagen)
- Nephrops Working Group (Aberdeen)
- Roundfish Working Group (Copenhagen)
- Mackerel Working Group
- Working Group on Marine Pollution and Baseline Monitoring in the North Atlantic (Copenhagen)
- Special Meeting on Diseases of Commercially Important Marine Fish and Shellfish (Copenhagen)
- Informal Meeting of Herring Biologists (Port Erin)
- EEC Scientific and Technical Committee on Fisheries (Brussels)
- Third Scallop Workshop (Port Erin)
- Oslo and Paris Commissions standing scientific committees (various centres)

## Home

Interdepartmental Environmental Committee

National Board for Science and Technology –  
 – Mariculture Committee  
 – Shellfish Advisory Group  
 – Bridging Committee.

Interdepartmental Sub-groups on Inshore and Offshore Oil Pollution.

## LEGISLATION

The Fishery Harbour Centres Act, 1980 (No. 22 of 1980) was enacted on 2 July, 1980. Particulars of the Statutory Instruments relating to Sea Fisheries made during the year are included in Appendix No. 22.

## PART II

## INLAND FISHERIES

Details of the catches of salmon, sea trout and eels in the various fishery districts during 1980 are given in Appendices Nos. 11 to 17 of this Report. As usual, the catches made in the Foyle Fisheries Commission area, formerly the Moville Fishery District, are not included but they are referred to in a separate section of this report.

In 1980 the catch of salmon and grilse amounted to 272,240 fish weighing 895 metric tonnes and valued at IR£3.2 million compared with 338,558 fish weighing 1,073 metric tonnes and valued at IR£5,154,227 for 1979. The overall average weight at 3.28 kg was slightly higher than in 1979. The commercial catch at 855 metric tonnes was lower than the 1979 figure of 1,033 metric tonnes. The total rod catch amounted to 11,351 fish weighing 39.84 metric tonnes and valued at IR£144,058 compared with 1979 when 11,759 fish weighing 39.72 metric tonnes and valued at IR£192,705 were caught. The total number of licences of all kinds issued for angling for salmon and sea trout was 13,000 compared with 12,900 in 1979. The salmon catch figures for nets and rods for the years 1978, 1979 and 1980 are given in Appendix No. 12.

In 1980 the salmon and grilse catch (by weight) was distributed as follows:-

Drift nets	72%
Draft nets	19%
Stake nets, snap nets, weirs and other commercial methods	5%
Rod and line	4%

The average weight and value of salmon caught by commercial fishing engines during the past three years are given in Appendix No. 11. Details of the catch of sea trout in 1980 in the various fishery districts are given in Appendix No. 13. Very little commercial fishing specifically for sea trout is done in this country and over 50% of the total catch is taken as a by-catch of commercial fishing for salmon. It is difficult therefore to compile accurate statistics.

## BOARDS OF CONSERVATORS

Details of receipts and expenditure of boards of conservators for the fishery year ended 30 September, 1980 are given in Appendix No. 18.

## RE-ORGANISATION OF INLAND FISHERIES' ADMINISTRATIVE ARRANGEMENTS:

The Fisheries Act, 1980 became law on 18 March. The purpose of the Act is to secure the more effective conservation and development of every aspect of our important inland fisheries — salmon, trout, coarse fish, eels, and including sea angling. Under the Act, the seventeen Boards of Conservators and the Inland Fisheries Trust Inc. were dissolved on the 28 October and replaced by the Central Fisheries Board and seven Regional Fisheries Boards. The headquarters of the Central Fisheries Board is in Galway at The Weir Lodge, Earl's Island, Galway. The headquarters of the Regional Fisheries Boards are located as follows:

	Headquarters	Address
Eastern Regional Board	Dublin	Balnagowan, Mobhi Boreen, Glasnevin, Dublin 9.
Southern Regional Board	Clonmel	12 Gladstone Street, Clonmel, Co. Tipperary.
South Western Regional Board	Macroom	Gurteenroe, Macroom, Co. Cork.
Shannon Regional Board	Limerick	Thomond Weir, Limerick.
Western Regional Board	Galway	The Weir Lodge, Earls Island, Galway.
North Western Regional Board	Ballina	Ardnaree House, Ballina, Co. Mayo.
Northern Regional Board	Ballyshannon	College Street, Ballyshannon, Co. Donegal.

The functions of the Central Fisheries Board and the Regional Fisheries Boards are set out in the Fisheries Act, 1980. In general each Regional Board is responsible for the conservation and development of every aspect of the fisheries within the board's designated fisheries region. The Central Board has responsibility to co-ordinate and where necessary to direct the performance by regional boards of their functions under the Act.

Amongst other important things the Fisheries Act, 1980 increased significantly the penalties for fishery offences.

Tribute is due to the former Boards of Conservators and to the Inland Fisheries Trust Inc. for their valuable work over many years.

### *INTERNATIONAL SALMON CONVENTION*

During the year Ireland, as a member State of the European Economic Community, participated in international negotiations about the possible introduction of an international Convention for the conservation of the salmon stocks of the North Atlantic Ocean. The negotiations continue.

### *SALMON LEVY*

On 26 May, 1980 a statutory levy of 10% of the price fetched was ordered to be paid on every first or only sale of salmon (including sea trout). Summary details of the statutory order and regulations, made under the Fisheries Act, 1980, which provided for the introduction and payment of the levy, are given in Appendix No. 22. The purpose of the levy is to provide a contribution towards the overall cost of conserving and developing our inland fisheries.

### *EMPLOYMENT IN THE INDUSTRY*

Exclusive of persons employed on the marketing and transport of fish, a total of some 6,500 persons found either whole-time or part-time employment in inland fisheries during the year. This figure includes 4,550 persons estimated as engaged in netting for salmon, 300 employed full or part-time by Regional Fisheries Boards on protection of fisheries, 800 engaged in netting and protection work in the Foyle Area, about 170 engaged in development work on behalf of the Central Fisheries Board and the remainder employed by proprietors of commercial and sport salmon fisheries or by angling associations.

### *INSTRUMENTS OF CAPTURE*

The numbers of the various types of licences issued in each fishery district and the rates of licence duty are given in Appendices Nos 19 and 20.

## EXPORTS OF FRESHWATER FISH

### *Salmon:*

The total quantity of salmon exported in fresh, chilled, frozen and salted forms was 720 tonnes compared with 667 tonnes in 1979. Total value of these exports fell from IR£3,857,650 in 1979 to IR£3,557,923. Details for the two years are as follows:

	1979		1980	
	Tonnes	IR£'000	Tonnes	IR£'000
Fresh, Chilled, Frozen				
Salmon	571	3,245	637	2,817
Smoked Salmon	96	613	83	741

Of the total quantity of fresh, chilled and frozen salmon exported in 1980, 329 tonnes went to Great Britain, 102 tonnes went to the Six Counties, 67 tonnes to the Netherlands, 63 tonnes to France, 34 tonnes to Spain and 14 tonnes to Belgium/Luxembourg.

The smoked salmon was exported mainly to the Federal Republic of Germany (23 tonnes), U.S.A. (14 tonnes), Great Britain (13 tonnes), Belgium/Luxembourg (13 tonnes), and The Six Counties (5 tonnes).

The average export price for fresh, chilled or frozen salmon was IR£4,422 per tonne as compared with IR£5,679 per tonne in 1979.

### *Rainbow Trout*

Exports of rainbow trout in 1980 amounted to 89 tonnes valued at IR£149,000 as compared with 72 tonnes at IR£97,000 in 1979.

### *Eels*

Exports of eels in 1980 amounted to 86 tonnes valued at IR£237,000 as compared with 182 tonnes at IR£392,000 in 1979.

## ARTIFICIAL PROPAGATION

The production and distribution of salmon, sea trout and

brown trout ova, fry, fingerlings and smolts produced at the various hatcheries are given in Appendix No. 23.

The total output of ova in the 1979/80 spawning season was as follows:-

Salmon	3,783,000
Brown Trout	1,215,000
Sea Trout	98,000

### POLLUTION CONTROL

The Department exercises an advisory role in regard to the issue by Local Authorities of licences under the Local Government Water Pollution Act, 1977. During the year the Department examined 310 applications for licences and made recommendations.

### WATER QUALITY MANAGEMENT PLANS

The Department collaborated with an Foras Forbartha in the preparation of draft Water Quality Management Plans as provided for in Section 15 of the Local Government (Water Pollution) Act, 1977. Maps showing the principal fresh water fishery resources of the rivers Barrow, Nore, Suir and Slaney were prepared and work on other rivers is in progress.

### RESEARCH AND DEVELOPMENT

#### *Salmon Stocks*

Drift nets caught 642 tonnes or 72% and draft nets caught 172 tonnes or 19% of the total catch respectively. The rod catch improved from 3.8% to 4.45% in 1980 as compared with 1979. The increase is attributed to two important factors, namely (a) a strong run of early salmon and (b) better escapement during the peak of the commercial season in a number of the larger river systems. However, some of the smaller river systems did not show any increase in rod catches.

The early run salmon consists mainly of 2 sea-winter fish, and in 1980 they ascended rivers in numbers which had not been exceeded since 1963. Coincidentally, this increase in 2 sea-winter salmon could be associated with a reported increase in the abundance of salmon in the Greenlandic fishery. A proportion of smolts tagged in Irish rivers have been recaptured in

Greenlandic waters and salmon tagged off Greenland have been recaptured in Irish waters as 2 sea-winter fish.

Whilst the spring fish fishery improved in 1980, the summer fishery for grilse remained in a state of decline. This decline could be due to over-fishing leading to a sharp drop in the annual numbers of parent salmon compared with the stock situation at the start of the 1970's. More hopefully, the decline in catch in 1980 was caused by adverse weather which restricted sea fishing. Escapement in 1980, based upon redd counts, was adjudged to be returning to average and in some rivers to have exceeded average. Analysis of fish counter escapement data pointed to increased runs in the Cork Blackwater and the rivers Shannon and Liffey, for example. However, in other systems such as the Burrishoole there was a further decrease in escapement, compared even with 1979.

The grilse run in 1980 was earlier than in 1979, and catches had virtually ceased by the end of the first week of July.

Along the west and south-west coasts the peak catching period was from June 20th to 30th. Peak catches on the north and north-west coasts (usually the earliest runs of grilse on the whole coast) were somewhat later than on the west and south-west coasts. This helps to dispel the idea that salmon and grilse strike Irish coastal waters after some random fashion. Tagging experiments indicate that fish released from specific points on many parts of the coast will migrate to a variety of destinations. These migratory patterns can be confirmed by subsequent annual tagging and release from the same points.

The Dublin Wholesale Fish Market provides valuable information of salmon catches drawing as it does for its supplies on landings made all round the coast. In 1980, this market handled almost 300 tonnes of salmon (approximately 93,839 salmon) which represented 34% by weight of the national catch. In particular the market handled a very large proportion of the early run spring fish. The highest average weight of salmon handled was 4.95 kg (10.9 lb) in the month of April, and the lowest average was during the grilse run in June, at 2.92 kg (5.8 lb). The combined average weight for the whole season was 3.28 kg (spring fish, summer fish, and grilse) or 7 lb approximately.

Catch per unit effort is one of the most important methods of estimating fish stock abundance. Normally the more abundant the numbers in a stock the less fishing effort will be required to catch any given number. In the case of salmon fishing, weather plays a controlling role in catch per unit of fishing effort. In 1980 there were severe storms in coastal waters



during the periods of peak runs of grilse, which must have curtailed severely the rate of catch per unit effort by the drift net fishermen. On the other hand draft nets and especially fixed engines are not hindered to the same degree in their fishing effort by bad weather, mainly because they operate in more sheltered bays and in estuaries of rivers. Therefore whilst it is recognised that catch per licensed fishing engine is not a complete record of catch per unit effort and so cannot reflect with full confidence the stock abundance of salmon, it is the only guide available at present for measuring the long term trends in the salmon fishery. The average number of salmon caught by the principal forms of licensed engines for the period 1974 to 1980 has been as follows:-

Year	Salmon catch per unit (No. of fish)			
	Drift Net	Draft Net	Fixed Engines	Snap Net
1974	429	170	416	70
1975	445	224	483	124
1976	314	132	385	97
1977	296	115	199	63
1978	261	109	180	43
1979	277	74	179	25
1980	205	89	338	40

Drift nets showed a further decline from the 1975 peak catch per unit effort. However, the three other main catching methods showed varying degrees of improvement. In particular, the catch per fixed engine is encouraging because the fishing effort exerted by such engines is almost constant from year to year. This evidence taken together with improved escapement in certain rivers as measured both by passage through fish counters and counts of the redds of spawning fish, gives rise to cautious hope that the parent stock is improving and that if this improvement can be maintained, increased catches could be expected by the middle of the present decade.

#### *Adult Salmon Sampling*

Scale samples together with length and weight were taken and recorded at a number of centres throughout the country. This work was made possible by the employment of student bursars and its main objective was to determine the composition of the overall stock situation. It was found that before June, 1980, the major component of the stock consisted of 2 sea-

winter salmon after that date 97% of the stock consisted of 1 sea-winter salmon i.e. grilse, with the balance of 3 % consisting of 2 sea-winter salmon and previous spawners. The very small percentage of previous spawners suggests that UDN is still in evidence especially among the spawning stock.

#### *Gear Selectivity and Mesh Marked Fish*

The noticeable increase in the incidence of mesh marked salmon in recent years has been investigated during the last two fishing seasons. Measurements of the size range of fish taken by drift nets and draft nets during the peak of the grilse run has provided valuable data. The mesh size of a drift net is 127mm stretched and this makes it highly selective over a certain limited range of fish lengths. Draft nets and fixed engines, by their method of operation exploit the complete size range of salmon available. However, it has been found that drift nets catch salmon of 2.6 kg (5.71 lbs) or heavier whilst draft nets catch salmon of 2.5 kg (5.5 lbs) or less. It seems therefore that the drift nets tend to select the larger and heavier salmon. At the point of selection, a number of salmon tend to slip out of the drift nets and those which survive this procedure may be taken by draft nets. For example, in one draft net on the Cork Blackwater, 35% of the catch in June and 54% of the catch in July bore drift net mesh marks. The weight range of these fish was from 1.0 kg (2.2 lbs) to 2.0 kg (4.4 lbs). Mesh marked fish were recorded also in the draft nets of the river Moy but not in such high proportions as in the case of the River Blackwater. This important study will be continued.

#### *Stock Management*

The research programme into the many considerations of salmon stock management which was initiated at the Department's fishery on the Corrib at Galway, in 1979, was continued and intensified. In the Corrib system all the major nursery streams were electro fished to estimate the populations of juvenile salmon. As in 1979, it was found that rivers flowing into Lough Corrib along the west and north-west shores were much more productive in terms of salmon per sq. metre than the eastern tributaries. The highest population of juveniles was 5.2 per m<sup>2</sup> in the Cornamona river and the lowest was 0.17 per m<sup>2</sup> in the Dunmore river.

A run of wild Corrib smolts was monitored during the April to June migration season and samples were taken for age determination and length relative to the time of running. Using this and other sampling techniques, the total natural pro-



duction of smolts in the Corrib system in 1980 was estimated at 250,000, based upon tagging and subsequent recapture at the smolt trap at the Galway Fishery.

Micro tagging, using coded magnetically charged short lengths of wire, was first used in the Corrib system in 1979. These tags are inserted into the nose of the fish and because of their small size they may be used on salmon parr, smolts or adults. They appear to have no ill effects on the fish tagged and because they are not visible externally do not render them more susceptible to predation. In 1980, a total of 70,000 smolts (including smolts from Cong Hatchery and the other three major rearing stations) together with 10,000 wild smolts from the River Corrib itself, were magnetically tagged and released. The first returns from these releases is expected in 1981. These minute tags are recovered by the use of magnetic detectors which record the presence of tags which can then be removed. The detectors are operated at a number of large landing and marketing centres.

#### *Salmon Migrations*

Due to causes beyond the Department's control, adult salmon tagging in 1980 was severely curtailed. There were only 15 salmon tagged in Galway Bay and of these, two were recaptured in the traps of the Galway Fishery having been released off the Clare coast. A further two recaptures, one off the north Mayo coast and one in the traps of the Galway Fishery, from the 1979 tagging programme raised the percentage recapture rate from that year's work to 14.7%.

A total of 323 kelts were tagged in the 1979/80 season at Glencullen, Co. Mayo at Virginia, Co. Cavan and at Carrigadrohid, Co. Cork. Of 254 tagged kelts released at Carrigadrohid 10 were recaptured, two as clean salmon off the Kerry coast. The remaining eight were recaptured in the river Lee itself during the same year as they were released. There were 3 recaptures from the Virginia releases, all in the River Boyne. There were none from the Glencullen releases.

#### *Smolt Migrations*

In 1980 there were only two returns of foreign tagged smolts in Irish waters, one having been released originally into a Swedish river and the other into a river on the south-west coast of France.

There were nine recaptures from wild smolts tagged on the

River Boyne. Seven of these were recaptured in the River Boyne itself, one in a drift net off Castletownbere, Co. Cork and another in a draft net at Creetown on the south-west coast of Scotland. Two smolts which had been reared in the Cong Hatchery were taken as adults, one off the Mayo coast, and the other in the hatchery trap of the Cong Canal. No tagged smolts were recaptured from those reared, tagged and released from the Virginia hatchery.

Survival of hatchery reared salmon smolts assume particular importance when it comes to assessing their contribution to commercial salmon fishing. Such studies were commenced in 1975, in which year a specific study was made in Kenmare Fisheries. Of a sample of 2,493 salmon examined in that area in 1975, only 42 or 1.6% were recorded as having arisen from reared smolts. Similar but more intensive observations have been made since 1975 and by 1980 these included observation centres in Donegal, north Mayo, Galway and west Cork. In 1980 the percentage of reared smolts appearing as adults in the drift net fisheries varied considerably. For example off Donegal and north Mayo, which are furthest from any of the rearing stations, only 2.3% returns were recorded. However, off west Cork, which is between two major rearing stations, the contribution of reared smolts rose to 9%. In the drift net fishery which extends from Killary to Spiddal and south to Black Head, the figure rose to 12% i.e. of a total catch of 16,339 salmon caught, 1,960 had been reared to the smolt stage before release. These results over the six year period of investigation indicate the potential importance of reared smolts and therefore these effects will continue to be monitored and evaluated.

#### *Ulcerated Dermal Necrosis (UDN)*

UDN was evident in January particularly in Waterford with a lower instance in Kerry and Cork. The Rivers Lennon, Lee and Shannon were badly affected from March to May. During the main run there were some instances and this trend continued until the end of the year.

#### *SEA TROUT*

A collection of rod caught sea trout from the Currane Fishery at Waterville, Co. Kerry, was examined and approximately 30 meristic characteristics of each fish were measured and recorded. Samples were also taken from biochemical analysis and preliminary results indicate that the Waterville stock displays genetic variations which are distinct from sea trout similarly examined from other parts of the Irish coast. That the Water-

ville sea trout differ in substance from other stocks around the country is being further demonstrated by fecundity studies currently being undertaken. Scales and life data were also collected from sea trout on the River Feale in Co. Kerry, and in Lough Eske, Co. Donegal. In addition, the age structure of sea trout of the Rosses system, as revealed from the automatic counter in that system, is also being analysed.

The angling catch over a 20 year period from the Newport River, Co. Mayo and the Doohalla fishery in Connemara is being analysed.

### RAINBOW TROUT AND SALMONID CULTURE

There was a further expansion of rainbow trout farming in 1980, when two new units went into production. The total tonnage of farmed rainbow trout was 269 tonnes. A trade is being developed in the production of 50g rainbow trout in freshwater units for transfer to sea cages for on-growing. The sea-cage yield of rainbow trout from six units was 133 tonnes in 1980. Sales of salmon reared in sea-cages declined from 24 tonnes to 18 tonnes in 1980.

The main disease problem which affects farmed rainbow trout in freshwater continues to be *Costia* sp, which can give rise to heavy mortality at first feeding. In salt water, Nephrocalcinosis, a kidney condition of unknown aetiology, continues to cause mortality in rainbow trout.

In salmon the main cause of heavy losses is furunculosis which breaks out when smolts are transferred from fresh to salt water. Vaccination by immersion and by intra-peritoneal injection is in progress in an effort to combat furunculosis.

A continuing problem, which has yet to be overcome, is the early maturity after one year of the majority of salmon reared in the sea. This leads to slaughter before they have reached the optimum market size which reduces their value very considerably. Work is in progress to ascertain whether this is a genetic or an environmental problem, the objective being to produce a majority of 2 winter salmon for cage rearing in salt water.

### EEL RESEARCH AND DEVELOPMENT

Silver eel migration in a number of river catchments began in August, at least a month in advance of the usual time. An all-time record catch of silver eels was made in the Galway fishery and in the Shannon fishery unprecedentedly high numbers of male eels were reported. These observations from the two major

fisheries in the State indicate that stocks are being maintained or increased.

Evaluation of accumulated data on stocks has confirmed that an enhanced programme for stocking with elvers could increase the yield by a factor of ten or more. A target of stocking at the annual rate of 450 elvers per hectare of productive lake (conductivity greater than 125  $\mu\text{S}/\text{cm}$ ) has been established. Stocking of the lakes on the River Shannon has been in progress since 1959 and in 1980 approached the target figure. A pilot operation of elver transport from the Ballisodare system to Lough Arrow began in 1980 and supplied 413 elvers per hectare.

Two eel tags recovered after an absence of four years and one after two years gave mean length increments varying from 2.2cm to 3.1cm per year. These values accord closely with length increments calculated from age determination using burned otoliths. All three recoveries were of specimens tagged at the same time and place on the River Barrow. A study of otoliths of a sample of eels from the same area is in progress and indicates that length increments decrease at a regular rate for the first six or seven years of freshwater life, after which a linear increase is maintained.

Migration of eels at all freshwater stages is being studied in the Corrib lake system. Floy tags are used extensively and experiments with sonic tags to follow silver eels migrating downstream have begun with encouraging results.

### SEALS

An onboard study of seal predation was undertaken in the Sligo drift net fishery. A total of 439 fish was examined from five boats during the survey period. Heads and partially eaten remains of 33 salmon were recovered giving a predation rate of 7.5%. The incidence of seal predation was also recorded in the draft net fishery in Ballysodare Bay over a two week period when 16.8% of the salmon were recorded damaged by seals.

Seal damage was also investigated in wholesale premises and auction halls in Burtonport, Ballina, Galway and Kenmare. The damage to salmon varied from 1.2% of the catch in north Mayo to 0.66% in Galway. No damaged fish were recorded in Kenmare where 5.073 salmon were examined. The data collected in auction halls and wholesale outlets did not account for heads or partly eaten fish as these were disposed of before reaching the wholesale premises. Hence the discrepancy which seems to exist between the Sligo predation data and that recorded in dealers' premises.

## ENVIRONMENTAL STUDIES

### Arterial Drainage and Water Abstraction

A water abstraction scheme proposal for the river Slaney was investigated. From the biological viewpoint the main areas of concern were possible loss of salmonid nursery area and pollution. The effects of floc settlement from the treatment works were also considered. The stretch of water affected by the abstraction had very few riffles being composed mostly of deep holding water. The loss of salmon and trout to the system based on population estimates done in similar systems could be in the region of 648 juvenile salmon and 754 juvenile brown trout. The river Slaney at present is virtually free of pollution but a reduction in the volume of water available for dilution could effect the quality of the water.

A preliminary investigation was carried out in a number of catchments in the west and north-west of the country with a view to selecting one for a proposed EEC Environmental Impact Assessment on drainage. The catchments under investigation are the Corrib/Mask, Boyle, Finn-Lackey, Bonet and Monaghan Blackwater. The River Bonet has been chosen as a special study area in view of its importance as a salmonid fishery; a system with stocks of coarse fish is also to be selected for study.

The annual population estimates were carried out on the Boyne to advise on rehabilitation of the system following drainage. With the exception of the Stoneyford River the recovery rate of the Boyne is considered to be slow. The main problem is the silt arising from drainage which has adversely affected the productivity of the river and the absence of suitable spawning and nursery areas in the catchment has affected the recovery of the system.

Approximately 47,000 salmon parr from the Virginia rearing station on the river Boyne were tagged using the micro tag method already described. These were released into various tributaries of the River Boyne to assess survival rate as part of the rehabilitation studies of the river consequent upon drainage. Results to date suggest that the survival of reared salmon parr has been of little value to the Boyne system.

Samples of water and fish were analysed at various times during 1980, for their content of PCBs, Lindane and heavy metals. A nutrient survey was commenced on the River Bonet catchment to assess the levels of increase likely to arise as a result of the proposed drainage of this water system.

## GRANT AIDED RESEARCH PROJECTS

### Studentships

There were five post-graduate studies being carried out, under the Department's studentship Scheme namely:-

- (i) Ecology of native crayfish and their potential for polyculture in Irish freshwater (TCD)
- (ii) Eel migration in the Galway Fishery (UCG)
- (iii) Pollution studies in the River Dodder (UCD)
- (iv) Study of infective pancreatic necrosis (UCC)
- (v) Classification of Irish rivers using chironomid pupal exuviae (UCD)

### Bursaries

Utilising the summer bursary scheme, thirteen undergraduate students from third level educational institutes were employed during the summer months to assist the scientific staff with their investigations. Four of these students assisted with sampling of the commercial catch of salmon at various landing places and market centres along the coast from Donegal to Kerry. Six of the students were engaged in population assessments of juvenile salmon, two of whom worked on the River Boyne and six on the Corrib. One student assisted with the seal survey in Sligo Bay; one was engaged in feeding trials and water quality monitoring in the Department's Hatchery at Glenties, Co. Donegal; and one student assisted with sea trout research at Waterville, Co. Kerry.

## ADVISORY SERVICES

The Department's scientific staff continued to provide advice for angling clubs, boards of conservators, Local Authorities and other state and semi-state concerns in relation to many aspects of freshwater fisheries. These advisory services also include membership of national committees concerned with water quality and water management regulations.

## ENGINEERING

### Arterial Drainage

Close contact was maintained between officers of the Department and their counterparts in the Office of Public Works (OPW) in relation to arterial drainage and post drainage works

in the Corrib/Mask, Moy, Maigue and Boyne systems. Preliminary discussions were also held with officers of OPW in connection with the proposed drainage schemes for the Monaghan Blackwater and the Finn/Lackey catchments. The brown trout restocking programme for Mask/Carra which commenced in 1979 continued in 1980.

Hydrological and hydrometric investigations, which started in 1979 were carried out by the Office of Public Works on the possible impact of the Mask/Carra drainage scheme on the water supply to the hatchery and rearing installations at Cong. Particular attention is being paid to the Castle Lake area which appears to be the main source of water for Cong Salmon Hatchery.

The effects of arterial drainage on the Bonet and Boyle/Lung catchments were examined.

#### *Investigations of Inland Fish Movement*

Smolt trapping operations at Galway Sluice Barrage started on 3rd March and ended on 28 June 1980, 24,338 salmon smolts were trapped and released during this period. The largest number of smolts trapped in one day was 2,716 on 28th April. In the same period 51 salmon kelts, 1 sea trout, 6 brown trout, 44 eels, 21 perch, 7 pike and 1 lamprey were trapped and released. All salmon kelts were clean and in good condition.

An installation consisting of a fish-fence, a trapping unit and an electronic fish-counter was constructed on the River Erriff, Co. Mayo. The work was supervised by the Department's area engineer.

#### *Water Abstraction*

The Department continued its work of assessing the likely impact of major water abstraction schemes on fish stocks and angling amenities in rivers and lakes and to advise Local Authorities on measures to be taken to ameliorate the effects. Cases handled or in progress included the Carlow North Water Abstraction Scheme, Carlow South Regional Scheme, River Cladnagh Scheme and the Mulcair Abstraction Scheme.

The denil type fish-pass with smolt gate arrangement which was designed by the Department's engineers was incorporated by Galway County Council into the Lough Owenboliska impounding dam. Construction work on the dam and fishery installations was completed.

### *Fish Culture Installations*

The Department continued to advise the Salmon Research Trust of Ireland Inc. on engineering matters relating to the fisheries under the Trust's control.

Engineering advice was readily available to the Boards of Conservators in the operation of the various fish rearing installations owned by the Boards. Construction work continued on the smolt rearing extension at Cong under the supervision and direction of the Department's engineers. This salmon smolt rearing unit will be in production in May, 1981.

### *Rainbow Trout Farming*

Proposed fish farm sites were investigated and assessed and advice given by the Department. Where necessary engineering designs were prepared and supplied. There is a steady interest in commercial rainbow trout fish farming.

### *Electronic Fish Counters*

Fish counting installations were maintained at the sites listed below. Included also are details of the numbers of salmon passing through the counters.

River	Location	Total Count	Maximum Count and date	
			Count	Date
*				
Bandon	Bandon	257	70	May 14
Blackwater	Clondulane	7,134	277	July 26
Boyne	Blackcastle	1,748	182	Sept 22
**				
Corrib	Galway	9,019	561	June 20
***				
Lennon	Ramelton	347	21	May 7
Liffey	Islandbridge	1,563	65	July 21
Inagh	Ennistymon	No count		

- Notes
- \* Operation intermittent due to damage to station.
  - \*\* Undercount due to hydraulic problems during floods.
  - \*\*\* No counts from August to end of year.



### *Application of Electricity to Fish Counting*

Work was continued by the Department's consultant at the Department's field laboratory at Glenties, Co. Donegal, and further advances were made in the development of a bio-electric salmon counter. Collaboration with workers in Britain was maintained through the agency of the Fish Counters Liaison Group.

### *Eel Fishery Development*

The eel trapping operations at the Department's fishery, Galway continued to be kept under observation with a view to improving the installations. Elver movements at Galway Sluice Barrage were monitored using elver traps installed under the direction of the area engineer. New site applications for eel fishery authorisations were investigated including applications for the use of fyke nets for the capture of eels.

### *FOYLE FISHERIES COMMISSION*

The Commission is comprised of a senior and a junior member appointed by the Minister for Fisheries and Forestry and a senior and a junior member appointed by the Department of Agriculture for Northern Ireland. The post of Chairman rotates each year between the two senior members of the Commission; during the year under review it was held by the Dublin senior member.

The Annual Report of the Commission gives detailed information on the Commission's activities during the year.

The spawning count of 2,927 for 1980 represents a decrease on the figure of 3,559 for 1979. The catch of salmon and grilse by commercial engines amounted to 49,223 (145,776 kg) compared with 37,003 (115,203 kg) in the previous year. The rod catch of salmon and grilse was 1,134 compared with 966 for 1979 while the rod catch of sea trout was 3,276 as against 4,455 for the previous year.

The operation of the Commission's commercial fishery in 1980 resulted in a deficit of £5,262 sterling as compared with a profit of £5,040 sterling in 1979. This decline was due mainly to a reduced catch. Each year the profit/deficit realised on the operation of the commercial fishery is credited/debited to the Commission's Accumulated Revenue Account.

During the year under review, the Department of Fisheries and Forestry and the Department of Agriculture for Northern Ireland (Fisheries Division) paid subventions totalling £122,488



sterling to the Commission to meet its deficit at 30th September, 1980. That deficit was considerably greater than the 1978/79 deficit and was due mainly to increased operating costs and to the fact that the operation of the Commission's commercial fishery resulted in a deficit rather than a profit as in previous years.

The Commission's Accounts for the year ended 30th September, 1980 are included as an appendix to its 1980 Annual Report. Particulars of Regulations made by the Commission in 1980 are included in Appendix No. 22 of this report.

### *INLAND FISHERIES TRUST INCORPORATED*

Until its dissolution in October in accordance with the Fisheries Act 1980, the Trust, aided by grant-in-aid totalling IR£1,027,700 continued with its programme of brown trout, coarse fish and sea fisheries development. Many waters were stocked with brown and rainbow trout and, in pursuance of its brown trout programme, numerous predating pike, perch and roach were removed from trout fisheries. Surveys of spawning and nursery areas were carried out particularly in the Corrib and Derravaragh systems.

In regard to development of our coarse fish fisheries, many new fishing stands were provided throughout the country bringing the total provided by the Trust in recent years to over 18,000. Existing facilities were maintained and repaired where necessary. The Trust expressed concern about the spread of roach in coarse fish fisheries. The undesirable development is a result of the illegal practice of using live roach as bait in fishing for other species.

Despite inclement weather conditions, sea angling on the south and west coasts was good in 1980. The Trust got very good co-operation from charter boat skippers in carrying out its marine tagging programme. Surveys were extended to the Castletownbere Peninsula and Fenit/Kerry Head areas and the Trust's sea-angling officers assisted a number of skippers with various angling problems.

The Trust continued to identify and remedy causes of pollution in waters under its control with co-operation from the Boards of Conservators, Agricultural Advisory Services and Local Authorities. Agricultural pollution is the main cause of pollution in Trust waters. Possibly the prime example of a lake affected by agricultural pollution is Lough Sheelin which has been subjected to a form of pollution known as eutrophication which resulted from the entry of excessive nutrients from pig

slurry into the lake with a consequent deterioration in water quality. Eutrophication of this lake was the subject of a report by the Trust in 1979, following which a slurry transport subsidy scheme was introduced in 1980. The scheme which is intended to remove excessive pig slurry from the catchment thus reducing harmful nutrient input to the lake, is run by a Management Committee and, at the end of 1980, much of the ground work had been done to bring the scheme into full effect in spring 1981.

It is hoped that the scheme will be successful in combating the downward trend in water quality which has been noticeable in recent years and that it will result in Lough Sheelin being restored as one of the premier brown trout fisheries in Europe.

### *MANAGEMENT OF STATE FISHERIES*

In 1980, 132 State owned fisheries – in the main vested in the Land Commission – were managed by Fisheries Division. Rents received during the year amounted to IR£6,460 compared with IR£6,001 in 1979.

Twenty-nine fisheries which fell due for re-letting were advertised during the year.

### *EEL FISHING DEVELOPMENT*

As indicated in the paragraphs dealing with scientific investigations engineering research work continued during the year on the investigation of eel stocks and eel fishing techniques. Advice and information on eel fishing were given to interested persons. Thirty-nine eel fishery authorisations are issued during the year bringing the number of fishing engines operating under such authorisations to 65.

### *GALWAY SALMON FISHERY*

The Galway Fishery was acquired in 1978 and continues to be developed as a commercial and research fishery. The commercial fishery showed a surplus of almost IR£44,000 in 1980. A major factor contributing to the highly satisfactory situation was the sale of eels which realised IR£42,353, while salmon sales realised IR£34,598. Angling facilities at the fishery are also attractive and resulted in an income of IR£4,795.

*THE SALMON RESEARCH TRUST OF IRELAND  
INCORPORATED*

The Annual Report of the Trust for 1980 gives a detailed account of its work during the year. The Trust continued to make a valuable contribution to our knowledge of the salmon and factors bearing on its future survival as a species.

The Trust is funded jointly by the Department and Messrs. Arthur Guinness, Son & Co. Ltd. The grant-in-aid paid to the Trust by the Department in 1980 amounted to IR£40,000.

The work of the Trust included dietary trials and disease control in an effort to produce a more viable smolt. Immunisation techniques to combat furunculosis by injection, dip and hypersomotic infiltration techniques were conducted.

Research into sea trout was intensified at the installation by an increase rearing programme to establish basic facts of sea trout biology which have not been evaluated heretofore by research.

Census work at the installations gave accounts of descending smolts and kelts and ascending adults. There was an improvement in the number of 2-sea-winter fish when compared to 1979, but the grilse run was poor and much earlier than in previous years. The total of 637 wild grilse was only 90% of the five year average (1975-79). Survival at sea (from smolt to grilse) was mediocre at 7.8%. The return of adults from the reared smolts declined to 1.5%. There were seven returns as 2-sea-winter fish all of which were derived from reared smolts line bred through four generations of grilse parents.

Some 10,700 reared smolts were released in 1980; 2,937 one year old and 7,768 two year old fish. The rearing programme was kept at the same level as previous years as it was considered that this amount is an adequate rearing programme for relevant data on exploitation, survival rate, and time of return to the system.

The Burrishoole Fishery was handed over as a gift to the Salmon Research Trust by Messrs. Arthur Guinness Son and Co. Ltd., at the beginning of 1980 and it was operated by the Trust as a sport fishery. Rod catches of grilse and sea trout were disappointingly low. The poor return from angling was due to a shortened angling season and the small stock of fish in the system. The presence of one or more seals in Lough Furnace was also considered to be a contributory factor in the reduced catch by rod anglers.

## INTERNATIONAL AND OTHER CONFERENCES

During the year, the Department was represented at the following conferences, committees and working groups etc.

### *Abroad*

- International Council for the Exploration of the Sea (ICES)  
Copenhagen, Denmark.
- European Inland Fisheries Advisory Commission (EIFAC)  
Stavanger, Norway.
- Institute of Fisheries Management symposium on cage fish  
farming – Reading.
- Institute of Fisheries Management study course – University  
of Sussex.
- Conference on the American Eel – Toronto.
- ICES Working Group on North Atlantic Salmon –  
Copenhagen.
- ICES/EIFAC Working Group on European Eels – Hamburg.
- West European Fishery Technologists Working Group,  
Copenhagen, Denmark.
- West European Fishery Technologists Association Meeting,  
Goteborg.
- Codex Alimentarius Commission, Bergen, Norway.
- Proposed international Convention for the conservation of  
salmon in the North Atlantic Ocean – meetings in  
Brussels and Washington.

### *Home*

- Water Resources Advisory Committee.
- River Erne Joint Protection Committee.
- Pollution Control Committee Donegal County Council.
- The Water Pollution Advisory Council.
- Steering Committee on EEC sponsored Environmental  
Impact Assessment of drainage.
- NBST Salmonid Advisory Committee.

## LEGISLATION

The Fisheries Act 1980 (No. 1 of 1980) was enacted on 18 March 1980. Particulars of the Statutory Instruments relating to Inland Fisheries made during the year are included in Appendix No. 22.

25 February 1982.

Tom Fitzpatrick,  
*Minister for Fisheries and Forestry.*

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Appendices 11 to 17 are compiled from returns furnished by licence holders in pursuance of the Statistics (Salmon, Sea Trout and Eels) (No. 2) Order, 1945.

## APPENDIX No. 1

Quantity and Value of Sea Fish (excluding Salmon) returned as landed in 1979 and 1980

SPECIES	Quantity		Value	
	1980	1979	1980	1979
	Tonnes	Tonnes	IR£'000	IR£'000
<b>DEMERSAL</b>				
Flat Fish				
Brill	0.1865	111	96	91
Dabs		182	35	48
Lemon Sole		175	81	70
Megrim	0.228	456	104	63
Plaice	0.514	1,797	924	871
Sole	2.191	299	655	440
Turbot	1.384	160	223	194
Other Flat Fish		35	10	15
Round Fish				
Cod	0.375	6,471	2,429	2,470
Haddock	0.251	985	287	340
Hake	0.500	276	138	84
Ling		96	24	24
Saithe		1,990	592	491
Whiting	0.167	12,177	2,033	1,894
Other Demersal Fish				
Dogfish		97	10	13
Monkfish		328	161	73
Ray/Skate		1,505	560	499
Other Demersal		90	36	41
<b>TOTAL DEMERSAL</b>		27,230	8,398	7,721
<b>PELAGIC</b>				
Herring		36,800	9,395	7,863
Sprat	0.075	9,350	705	128
Mackerel		50,791	4,225	1,792
<b>TOTAL PELAGIC</b>		96,941	14,325	9,783
<b>TOTAL WET FISH</b>		124,171	22,723	17,504
<b>CRUSTACEANS</b>				
Crabs		970	211	243
Crawfish		98	528	483
Dublin Bay Prawns		2,461	2,219	3,744
Lobsters		284	1,325	1,457
Palaemonid Shrimps		70	154	91
<b>TOTAL CRUSTACEANS</b>		3,883	4,437	6,018
<b>MOLLUSCS</b>				
Escallops		304	276	210
Queen Escallops		3	1	2
Mussels		4,557	2,939	152
Oysters		422	534	541
Periwinkles		1,329	405	326
Palourdes		4	8	15
Squid		85	79	44
Other Molluscs		21	42	27
<b>TOTAL MOLLUSCS</b>		6,725	1,636	1,317
Sea Urchins		108	70	66
<b>TOTAL ALL-FISH</b>		134,887	28,866	24,905

In addition to the above landings into the Republic, 9,356 tonnes of fish and 42 tonnes of shellfish, valued at IR£6,554,113 and IR£50,629 respectively were landed directly into foreign ports or transhipped at sea for export by Irish registered vessels during 1980.

Drac  
Hullet  
Sea Scorp  
Addlefish  
Gurnard

\* Tophnot  
\* Sea bass  
\* Sea bream  
\* Haddock

\* Cornish  
\* Spotted  
\* Hake

Ray's Bream  
Horn

Sand-eel  
Blue  
Whiting  
Pike  
Horse Mackerel

Shad

Silver eel

Sweet

\* Pollack

Long  
Low F.B.  
Tong

J. Perry



## APPENDIX No. 2

Comparison of the Average Price per tonne of various kinds of Sea Fish, 1972-1980.

SPECIES	1972	1973	1974	1975	1976	1977	1978	1979	1980
	£	£	£	£	£	£	IR£	IR£	IR£
Sole	624	931	1,006	1,200	1,485	1,732	2,093	2,184	2,192
Brill	277	354	411	477	515	680	740	826	866
Turbot	275	358	444	510	799	1,145	1,231	1,444	1,389
Plaice	192	217	247	276	364	457	519	557	514
Dabs	68	93	81	114	143	176	195	215	193
Megrims	62	95	94	114	149	230	206	260	229
Ray/Skate	138	161	191	200	228	262	306	375	372
Cod	116	139	176	173	242	375	406	448	375
Haddock	63	96	111	181	188	327	365	373	291
Hake	125	141	150	176	288	456	428	571	499
Whiting	49	68	70	90	109	205	217	228	167
Saithe	64	82	97	118	142	255	301	312	297
Herrings	44	72	100	112	142	261	295	287	255
Mackerel	32	46	43	44	61	77	63	74	83
Sprats	11	17	19	17	25	33	38	67	75

N.B.—“Average price” as shown in this table represents total value divided by total weight for each kind of fish, year by year. It does not purport to take direct cognizance of any abnormal rise or fall in price attributable to a seasonal glut or shortage of a particular kind of fish.

## APPENDIX No. 3

Value of landings of Sea Fish (excluding Salmon) at ports at which the value of such landings exceeded IR £170,000 in 1980.

PORT	TOTAL		DEMERSAL		PELAGIC		SHELLFISH	
	IR£000	Tonnes	IR£000	Tonnes	IR£000	Tonnes	IR£000	Tonnes
1. Killybegs	8,997	61,778	1,438	5,732	7,520	56,023	39	23
2. Howth	1,733	6,095	1,412	5,137	176	807	145	151
3. Rossaveel	1,629	6,877	202	646	1,334	6,174	93	57
4. Dunmore East	1,276	5,890	495	1,602	701	4,228	80	60
5. Castletownbere	1,161	4,273	529	1,221	377	2,761	255	291
6. Fenit	1,114	3,201	44	118	727	2,839	343	244
7. Galway	1,061	7,166	288	1,435	422	5,470	351	261
8. Clogherhead	948	1,732	271	913	3	15	674	804
9. Skerries	904	2,515	290	995	242	978	372	542
10. Burtonport	756	5,404	130	399	552	4,951	74	54
11. Kilmore Quay	690	1,646	411	1,103	85	355	194	188
12. Greencastle	688	1,588	632	1,459	22	97	34	32
13. Dingle	464	1,718	246	803	166	875	52	40
14. Achill	453	1,224	116	249	255	951	82	24
15. Helvick	433	1,701	264	1,046	119	598	50	57
16. Union Hall	366	897	180	539	27	177	159	181
17. Schull	334	866	181	540	32	170	121	156
18. Kinsale	323	1,382	93	256	216	1,111	14	15
19. Cobh	300	1,291	99	270	194	1,019	7	2
20. Valentia	287	665	98	235	58	375	131	55
21. Baltimore	274	804	11	29	155	698	108	77
22. Balbriggan	236	355	59	198	2	11	175	146
23. Rathmullen	208	2,332	-	-	205	2,323	3	9
24. Clifden/Cleggan	176	181	43	86	10	40	123	55
25. Youghal	172	641	78	226	74	404	20	11

## APPENDIX No. 4

Imports and Exports of Fish and Fishery Products in 1980  
(as compared with 1979)

	Quantity		Value	
	1980	1979	1980	1979
	Tonnes	Tonnes	IR£000	IR£000
<b>I. — IMPORTS:</b>				
Fish, fresh, chilled or frozen	6,669	4,682	8,297	6,800
Fish, salted, dried or smoked	1,382	1,591	1,717	1,746
Shellfish, fresh, salted or dried	589	285	1,642	1,047
Prepared or preserved fish	2,382	1,788	4,525	2,866
Prepared or preserved shellfish	219	94	499	262
Fishmeal and Fish oils	11,986	13,511	3,407	3,424
<b>TOTALS</b>	<b>23,227</b>	<b>21,951</b>	<b>20,087</b>	<b>16,145</b>
<b>II. — EXPORTS:</b>				
Fish, fresh, chilled or frozen	59,590	28,012	22,128	15,360
Fish, salted, dried or smoked	12,385	10,672	8,234	7,150
Shellfish, fresh, salted or dried	6,663	6,092	8,356	8,974
Prepared or preserved fish	1,033	760	1,100	940
Prepared or preserved shellfish	120	22	127	41
Fishmeal and Fish oils	4,184	3,676	861	760
Landed directly into foreign ports or transhipped at sea for export, by Irish registered vessels				
I Fish	9,356	4,095	6,554	1,716
II Shellfish	42	1,138	51	429
<b>TOTALS</b>	<b>93,373</b>	<b>54,467</b>	<b>47,411</b>	<b>35,370</b>

## APPENDIX No. 5

## HERRING FISHING, 1980

Ports at which more than 1,000 tonnes were landed	Total Quantity	Total Value
	Tonnes	IR£'000
1. Killybegs	13,065	3,441
2. Rossaveel	5,761	1,301
3. Dunmore East	2,814	581
4. Fenit	2,809	725
5. Kinsale	1,054	205
6. Burtonport	1,036	295

## APPENDIX No. 6

## MACKEREL FISHING, 1980

Ports at which more than 100 tonnes were landed	Total Quantity	Total Value
	Tonnes	IR£'000
1. Killybegs	41,657	4,000
2. Burtonport	3,915	258
3. Rathmullen	2,268	190
4. Castletownbere	1,104	99
5. Rossaveel	411	34
6. Garnish/Travarra	254	23
7. Valentia	197	17
8. Dingle	191	13

## APPENDIX No. 7

## REGIONAL DISTRIBUTION AND CLASSIFICATION OF FISHING CRAFT AND OF PERSONNEL ENGAGED IN FISHING IN 1980

I.C.E.S. Statistical Areas	How Engaged	Men	Total Vessels	MOTOR VESSELS							Boats propelled by outboard engines, sails or oars	
				— Gross Tons —								
				Over 100	75-99	51-74	26-50	16-25	11-15	10 and under	18' Keel and upwards	Under 18' Keel
AREA VIIA (Ormeau to Helvick)	Solely	928	328	8	27	49	64	5	10	109	56	—
	Partially	546	127	—	—	—	—	—	—	25	81	21
	Laid-up	—	24	2	1	8	6	4	3	—	—	—
Totals		1,474	479	10	28	57	70	9	13	134	137	21
AREA VIIIG-H (Ardmore to Clonakilly)	Solely	137	76	—	—	—	3	1	8	56	8	—
	Partially	278	84	—	—	—	—	—	—	5	74	5
	Laid-up	—	—	—	—	—	—	—	—	—	—	—
Totals		415	160	—	—	—	3	1	8	61	82	5
AREA VIID-K (Union Hall to Ballyduff)	Solely	1,031	454	11	6	13	22	11	75	223	93	—
	Partially	827	200	—	—	—	—	—	3	20	145	32
	Laid-up	—	11	3	1	4	2	1	—	—	—	—
Totals		1,858	665	14	7	17	24	12	78	243	238	32
AREA VIIB-C (Kilrush to Mullaghmore)	Solely	290	94	7	3	11	15	5	9	24	18	2
	Partially	2,450	1,001	—	—	—	—	1	2	385	470	143
	Laid-up	—	6	1	—	1	4	—	—	—	—	—
Totals		2,740	1,101	8	3	12	19	6	11	409	488	145
AREA VIA (Bundoran to Moville)	Solely	1,099	127	35	7	22	27	6	4	26	—	—
	Partially	1,238	523	—	—	—	6	4	1	209	252	51
	Laid-up	—	12	1	2	2	5	2	—	—	—	—
Totals		2,337	662	36	9	24	38	12	5	235	252	51
TOTALS (all Areas)	Solely	3,485	1,079	61	43	95	131	28	106	438	175	2
	Partially	5,339	1,935	—	—	—	6	5	6	644	1,022	252
	Laid-up	—	53	7	4	15	17	7	3	—	—	—
Totals		8,824	3,067	68	47	110	154	40	115	1,082	1,197	254

For comparative purposes with previous years the I.C.E.S. Areas VII G-H and VII J-K together would equate with the former I.C.E.S. Area VII C-K.

APPENDIX No. 8  
TRAWLING AND SEINING, 1980

Port or Locality	Number of men engaged	Number of vessels engaged	Tonnage of Motor Vessels			Fishing Period
			Not exceeding 10 tons	Over 10 tons	Over 25 tons	
Clogherhead	112	25	2	—	23	All year
Balbriggan	48	11	1	—	10	All year
Skerries	127	27	—	—	27	All year
Howth	138	29	—	—	29	All year
Dublin	6	2	2	—	—	Occasionally
Dun Laoire	27	6	—	1	4 5	All year
Wicklow	2	1	1	—	—	All year
Arklow	46	11	—	—	11	All year
Courtown	8	3	3	—	—	Occasionally
Wexford	29	10	6	—	4	All year
Rosslare	5	1	—	—	1	All year
Carne/St. Helens	20	7	7	—	—	Occasionally
Kilmore Quay	135	30	3	5	22	All year
Duncannon	10	2	—	—	2	All year
Ballyhack	23	3	2	1	—	Occasionally
Cheekpoint	4	2	2	—	—	Occasionally
Passage East	9	3	3	—	—	Occasionally
Dunmore East	39	8	—	—	8	All year
Stradbally	6	3	3	—	—	Occasionally
Helvick	53	20	12	2	6	All year
Dungarvan	8	4	4	—	—	Occasionally
Ardmore	8	4	4	—	—	Occasionally
Youghal	24	12	12	—	—	Occasionally
Ballycotton	9	3	—	3	—	Occasionally
Cobh	17	10	8	2	—	All year
Crosshaven	20	10	6	4	—	All year
Knockadoon	6	3	3	—	—	Occasionally
Kinsale	28	11	8	—	3	All year
Union Hall	43	14	6	—	8	All year
Baltimore	28	13	12	—	1	All year
Schull	23	5	—	1	4	All year
Cape Clear	4	1	—	—	1	All year
Goleen/Crookhaven	2	1	—	1	—	All year
Dunmanus	2	1	—	1	—	All year
Castletownbere	146	20	—	3	17	All year
Ballinskelligs	4	1	—	—	1	All year
Valentia Island	4	1	—	—	1	Occasionally
Portmagee	8	2	—	—	2	All year
Cahiriveen	26	4	—	—	4	All year
Dingle	75	17	—	5	12	All year
Fenit	4	1	—	—	1	Occasionally
Aran Islands	63	12	—	1	11	All year
Galway	18	4	—	—	4	All year
Rosaveel	7	1	—	—	1	All year
Roundstone	4	1	—	1	—	All year
Cleggan	10	3	—	1	2	Occasionally
Ballyglass	8	2	—	—	2	All year
Killala	25	7	—	5	2	All year
Rosses Point	7	2	1	—	1	Occasionally
Killybegs	398	51	—	2	49	All year
Burtonport	131	22	—	—	22	All year
Bunbeg	8	2	—	1	1	All year
Magharoarty/Tory						
Innisboffin	4	1	—	—	1	Occasionally
Urrus/Dunaff	21	5	—	1	4	Occasionally
Buncrana	12	3	—	3	—	All year
Dunfanaghy	4	1	—	—	1	All year
Greencastle	88	18	—	—	18	All year
Teelin	36	9	7	2	—	All year
TOTALS	2,180	486	118	46	322	



## APPENDIX No. 9A.

STATEMENT OF ACCOUNT IN RESPECT OF  
REPAYABLE ADVANCES

Advance of IR£19,010,721 made to An Bord Iascaigh Mhara during the period of twenty nine years to 31 December, 1980 for provision of boats and gear and other purposes:—

## Repayment of Principal:

	IR£
Made to 31 December 1979	2,142,456
Made during year	325,354
Principal written off to 31 December, 1980	1,682,213
	<hr/>
	4,150,023
Adjustment of apportionment between interest and principal for 1980	607
	<hr/>
	4,149,416

Balance of principal outstanding at 31 December, 1979:  
IR£14,861,305

## Erratum:

1979 in penultimate line  
should read 1980.

## APPENDIX No. 9B

EXPENDITURE ON FISHERIES FOR THE YEARS ENDED  
31 DECEMBER 1979 and 31 DECEMBER 1980

(All figures rounded to nearest IR£1,000)

1. SEA FISHERIES By (a) Department of Fisheries and Forestry (Fisheries Division)	1 Jan. 1980 to 31 Dec. 1980	1 Jan. 1979 to 31 Dec. 1979
	IR£ 208,000	IR£ 155,000
(i) Development	nil	nil
(ii) Fishery School		
(iii) Fishery Harbours and other Marine Works	3,538,000	1,679,000
(b) An Bord Iascaigh Mhara		
(i) Administration and Current Development (grant-in-aid)	3,785,000	3,140,000
(ii) Capital Development (grant-in-aid)	4,900,000	3,000,000
(iii) Repayable Advances* (mainly for boats and gear)	2,304,000	1,736,000
(iv) Repayment of Advances written off	138,000	200,000
(c) Roinn na Gaeltachta Grants for marine works	192,000	174,000
2. INLAND FISHERIES		
by: (a) Department of Fisheries and Forestry (Fisheries Division) Development	1,873,000	1,453,000
(b) The Inland Fisheries Trust Incorporated (grant-in-aid)	1,028,000	971,000
(c) The Salmon Research Trust of Ireland Incorporated (grant-in-aid)	40,000	13,000
DEPARTMENT OF FISHERIES AND FORESTRY		
Salaries, Wages and other administrative Expenses for Fisheries Division	1,087,000	1,039,000
Totals	19,093,000	13,560,000

\*A statement of Account in respect of Repayable Advances is given in Appendix 9A.

## APPENDIX No. 10

COASTAL EXTENT OF FISHERY DISTRICTS AND NAMES OF THE  
PRINCIPAL RIVERS IN EACH DISTRICT

District	Coastal Extent of District	Principal Rivers
No. 1 Dublin	Most easterly point on Red Island, Skerries, to Wicklow Head.	Liffey Vartry.
No. 2 Wexford	Wicklow Head to Kiln Bay, east of Bannow Bay, Co. Wexford.	Slaney Avoca.
No. 3 Waterford	Kiln Bay, east of Bannow Bay, to Helvick Head, Co. Waterford.	Suir Barrow Nore.
No. 4 Lismore	Helvick Head to Ballycotton Pier, Co. Cork.	Blackwater, Funcheon, Bride, Awbeg.
No. 5 Cork	Ballycotton Pier to Crow Head, Co. Cork.	Lee, Owenboy, Bandon, Argideen, Ilen, Mealagh, Owvane, Coomhola, Glengarriff, Adrigole.
No. 7 Kerry	Crow Head, Co. Cork, to Kerry Head, Co. Kerry.	Roughy, Sheen Finnihy, Blackwater, Sneem, Laune, Flesk, Maine, Caragh, Currane, Cummeragh, Inny.
No. 8 Limerick	Kerry Head, Co. Kerry, to Hag's Head, Co. Clare.	Shannon, Deel, Fergus, Mulcair, Little and Upper Brosna, Inny, Mague, Feale.
No. 9 <sup>1</sup> Galway	Hag's Head to the sea point of the boundary between the townlands of Keeraunagark South and Banraghbaun South, Co. Galway.	Corrib, Claregalway.
No. 9 <sup>2</sup> Connemara	The sea point of the boundary between the townlands of Keeraunagark, South and Banraghbaun South, Co. Galway, to Slyne Head, Co. Galway.	Ballinahinch, Recess, Cashla, Owengowla, Invermore, Inverbeg, Screebe, Furnace.
No. 10 <sup>1</sup> Ballinakill	Slyne Head to Pigeon Point, Westport Bay, Co. Mayo.	Culfin, Errif, Bundorraga, Dawros, Carrowiskey, Bunowen (Louisburgh).
No. 10 <sup>2</sup> Bangor	Pigeon Point to Benwee Head, Co. Mayo.	Newport, Burrishoole, Owenduff, Owengarve, Owenmore, Glenamoy.
No. 11 Ballina	Benwee Head to Coonamore Point, Co. Sligo.	Moy, Cloonaghmore (Palmerston), Easkey.

District	Coastal Extent of District	Principal Rivers
No. 12 Sligo	Coonamore Point to Carrickgarve, Co. Sligo.	Ballisodare, Garavogue (Sligo), Bonet, Drumcliff.
No. 13 Ballyshannon	Carrickgarve to Rossan Point, Co. Donegal.	Erne, Bundrowes, Bunduff, Eske, Eaney Water, Oily, Glen.
No. 14 <sup>1</sup> Letterkenny	Rossan Point to Malin Head, Co. Donegal.	Owenea, Gweebarra, Gweedore (Crolly), Clady, Lackagh, Lennon, Crana.
No. 17 <sup>2</sup> Dundalk	Carlingford Lough to Clogherhead, Co. Louth.	Fane, Dee, Glyde.
No. 17 <sup>1</sup> Drogheda	Clogherhead to the most easterly point on Red Island, Skerries, Co. Dublin.	Boyne, Blackwater, Deel.

**Note**—The area comprised in the former No. 14<sup>2</sup> or Merville District was by the Foyle Fisheries Act, 1952, incorporated in the Foyle Area which is administered by the Foyle Fisheries Commission.

## APPENDIX No. 11

Quantity and value of all Salmon and Sea Trout taken in 1978, 1979, and 1980  
by Instruments of Capture.

SALMON						
Instruments	1980 kg	1979 kg	1978 kg	1980 IR£	1979 IR£	1978 IR£
Total for all engines	894,508	1,073,038	1,179,335	3,234,721	5,154,227	3,987,286
Total for rod and line	39,836	39,719	31,425	144,058	242,642	107,352
Total for drift nets	641,918	882,933	843,238	2,321,302	4,182,216	2,840,807
Total for draft nets	171,755	129,608	255,636	621,100	628,590	871,969
Total for stake nets weirs etc.	40,999	20,778	49,036	148,261	100,779	167,158

SEA TROUT						
Instruments	1980 kg	1979 kg	1978 kg	1980 IR£	1979 IR£	1978 IR£
Total for all engines	66,751	28,335	516,20	233,629	70,848	103,240
Total for rod and line	18,139	15,654	36,558	63,486	39,139	73,116
Total for drift nets	35,008	5,685	4,806	122,528	14,215	9,612
Total for draft nets	13,259	6,253	8,913	46,407	15,636	17,826
Total for stake nets weirs etc.	345	743	1,343	1,208	1,858	2,686

Erratum: The weight of sea trout captured by drift nets should read 5597 kg with a value of IR £19,586.

The total for all engines should read 37340 kg with a value of IR £130,687.

## APPENDIX No. 12

Quantity and Value of Salmon taken in 1978, 1979 and 1980 by  
Fishery Districts.

Fishery Districts	*	Quantity			Value		
		1980 kg	1979 kg	1978 kg	1980 IR£	1979 IR£	1978 IR£
Dublin	R	632	475	336	2,287	2,304	1,120
	N	1,088	220	585	3,934	1,067	2,078
Wexford	R	1,751	1,445	1,502	6,332	7,008	5,287
	N	9,580	4,334	11,011	34,642	21,020	38,649
Waterford	R	5,537	4,506	4,208	20,022	21,854	14,349
	N	59,813	42,524	96,384	216,296	106,237	328,756
Lismore	R	1,808	3,130	2,451	6,539	15,181	8,358
	N	80,168	61,230	114,615	289,902	296,971	390,837
Cork	R	3,001	3,261	1,413	10,852	15,816	4,734
	N	93,783	176,888	153,930	339,137	857,907	515,665
Kerry	R	4,207	3,664	3,598	15,213	17,770	12,269
	N	75,042	127,721	116,829	271,366	619,447	398,417
Limerick	R	6,310	3,647	1,990	22,817	17,688	6,667
	N	43,332	48,752	76,064	156,699	236,447	254,815
Galway	R	1,826	653	487	6,605	3,167	1,666
	N	41,286	58,518	36,102	149,297	283,813	123,468
Connemara	R	693	545	1,022	2,506	2,643	3,495
	N	6,988	7,185	5,966	25,271	34,847	20,404
Ballinakill	R	2,832	1,492	885	10,240	7,236	3,027
	N	8,404	11,722	9,254	30,393	56,847	31,649
Bangor	R	1,841	1,887	2,282	6,658	9,152	7,802
	N	70,587	102,446	73,627	255,256	496,859	251,802
Ballina	R	2,020	7,954	2,786	7,306	88,577	9,529
	N	138,085	118,747	134,368	499,343	575,923	459,538
Sligo	R	1,766	1,743	2,511	6,386	8,454	8,588
	N	14,799	17,630	15,213	53,515	85,505	52,029
Ballyshannon	R	406	1,193	2,295	1,468	5,786	7,869
	N	40,358	34,490	85,902	145,943	167,277	293,783
Letterkenny	R	4,282	3,205	3,118	15,486	15,544	10,666
	N	157,255	208,772	201,468	568,666	1,012,544	658,318
Dundalk	R	116	282	188	418	1,373	683
	N	4,071	6,639	11,367	14,723	32,199	41,312
Drogheda	R	808	637	353	2,923	3,089	1,243
	N	10,033	5,501	5,225	36,280	26,675	18,414
TOTALS		894,508	1,073,038	1,179,335	3,234,721	5,154,227	3,987,286

\* R indicates capture by means of single rod and line.  
N by means of net, weirs, etc.



## APPENDIX No. 13

Quantity and Value of Sea Trout taken in 1978, 1979 and 1980 by  
Fishery Districts.

Fishery Districts	*	Quantity			Value		
		1980 kg	1979 kg	1978 kg	1980 IR£	1979 IR£	1978 IR£
Dublin	R	830	531	328	2,905	1,328	656
	N	32,679	3,303	1,506	114,376	8,258	3,012
Wexford	R	865	381	968	3,027	953	1,936
	N	1,106	176	1,026	3,871	440	2,052
Waterford	R	305	68	680	1,068	170	1,360
	N	352	434	842	1,232	1,086	1,684
Lismore	R	265	143	2,968	928	358	5,936
	N	564	50	470	1,974	125	940
Cork	R	1,187	544	2,365	4,154	1,360	4,730
	N	910	384	476	3,185	961	952
Kerry	R	916	3,643	4,982	3,206	9,108	9,964
	N	314	2,448	1,726	1,099	6,120	3,452
Limerick	R	719	374	656	2,517	935	1,312
	N	837	1,255	2,869	2,930	3,138	5,738
Galway	R	381	91	688	1,334	228	1,376
	N	162	427	402	567	1,068	804
Connemara	R	3,501	3,974	12,468	12,253	9,935	24,936
	N	72	550	646	252	1,375	1,292
Ballinakill	R	684	513	3,987	2,394	1,283	7,974
	N	1,586	306	575	5,551	765	1,150
Bangor	R	1,848	1,724	2,878	6,468	4,310	5,756
	N	612	575	860	2,142	1,438	1,720
Ballina	R	619	739	756	2,166	1,848	1,512
	N	1,668	619	945	5,838	1,548	1,890
Sligo	R	187	596	305	655	1,490	610
	N	160	382	654	560	955	1,308
Ballyshannon	R	1,301	569	212	4,553	1,423	424
	N	2,236	228	186	7,826	571	372
Letterkenny	R	1,823	510	686	6,380	1,275	1,372
	N	801	435	751	2,804	1,088	1,502
Dundalk	R	912	540	986	3,192	1,350	1,972
	N	224	88	510	784	220	1,020
Drogheda	R	1,796	714	645	6,286	1,785	1,290
	N	4,329	1,021	618	15,152	2,553	1,236
TOTALS		66,751	28,335	51,620	233,629	70,848	103,240

\* R indicates capture by means of single rod and line.  
N by means of net, weirs, etc.

Erratum: The weight of sea trout captured in the Dublin district by nets should read 3268kg with a value of IR£11434. The total catch should read 37340kg with a value of IR£130687.

## APPENDIX No. 14

## Quantity and Value of Eels in 1978, 1979 and 1980 by Fishery Districts

Fishery Districts	Quantity			Value		
	1980 kg	1979 kg	1978 kg	1980 IR£	1979 IR£	1978 IR£
Dublin	—	1,016	610	—	2,408	1,287
Wexford	134	242	292	177	574	616
Waterford	2,400	19,044	19,244	4,800	45,134	40,605
Lismore	1,270	1,466	659	1,270	3,474	1,390
Kerry	440	1,016	1,003	440	2,408	2,116
Limerick	33,459	42,411	24,000	72,821	100,514	50,640
Galway	27,637	21,335	15,583	57,520	50,564	32,880
Bangor	532	2,828	—	1,064	6,702	—
Ballina	1,000	1,032	1,000	2,000	2,446	2,110
Sligo	—	254	—	—	602	—
Ballyshannon	6,088	10,064	10,000	7,246	23,852	21,100
Dundalk	590	5,050	—	1,199	11,969	—
Drogheda	1,143	4,048	4,064	1,260	9,594	8,575
TOTALS	74,693	109,806	76,455	149,797	260,241	161,319

The catch figures set out above are based on returns which are not complete. This explains any apparent inconsistency between the figures and the official export figures in any particular year.

## APPENDIX No. 15

Total Quantity and Value of Salmon, Sea Trout and Eels taken by all engines in 1978, 1979 and 1980.

Fishery Districts	Total Quantity for District			Total Value for District		
	1980 kg	1979 kg	1978 kg	1980 IR£	1979 IR£	1978 IR£
Dublin	35,229	5,545	3,365	123,502	15,365	8,153
Wexford	13,436	6,578	14,799	48,049	29,995	48,540
Waterford	68,407	66,576	121,358	243,418	174,481	386,754
Lismore	84,075	66,019	121,163	300,613	316,109	407,461
Cork	98,881	181,077	158,184	357,328	876,044	526,081
Kerry	80,919	138,492	128,138	291,324	654,853	426,218
Limerick	84,657	96,439	105,579	257,784	358,722	319,172
Galway	71,292	81,024	53,262	215,323	338,840	160,194
Connemara	11,254	12,254	20,102	40,282	48,800	50,127
Ballinakill	13,506	14,033	14,701	48,578	66,131	43,800
Bangor	75,420	109,460	79,647	271,588	518,461	267,080
Ballina	143,392	129,091	139,855	516,653	670,342	474,579
Sligo	16,912	20,605	18,683	61,116	97,006	62,535
Ballyshannon	50,389	46,544	98,595	167,036	198,909	323,548
Letterkenny	164,161	212,922	206,023	593,336	1,030,451	671,858
Dundalk	5,913	12,599	13,051	20,316	47,111	44,987
Drogheda	18,109	11,921	10,905	61,901	43,696	30,758
TOTALS	1,035,952	1,211,179	1,307,410	3,618,147	5,485,316	4,251,845

Erratum: The weight of salmon, sea trout, and eels captured in the Dublin district should read 5818 kg with a value of IR £20560. The total catch should read 1006541 kg with a value of IR £3515205.

## APPENDIX No. 16

Number, Quantity and Value of Salmon taken by Single Rod and Line in 1978, 1979 and 1980 by Fishery Districts.

Fishery Districts	No. of Fish			Quantity			Value		
	1980	1979	1978	1980 kg	1979 kg	1978 kg	1980 IRE	1979 IRE	1978 IRE
Dublin	154	118	94	632	475	336	2,287	2,304	1,120
Wexford	429	441	422	1,751	1,445	1,502	6,332	7,008	5,287
Waterford	1,218	1,517	1,023	5,537	4,506	4,208	20,022	21,854	14,349
Lismore	519	869	473	1,808	3,130	2,451	6,539	15,181	8,358
Cork	1,018	790	447	3,001	3,261	1,413	10,852	15,816	4,734
Kerry	1,547	1,122	1,074	4,207	3,664	3,598	15,213	17,770	12,269
Limerick	1,502	963	603	6,310	3,647	1,990	22,817	17,688	6,667
Galway	537	200	145	1,826	653	487	6,605	3,167	1,666
Connemara	232	167	300	693	545	1,022	2,506	2,643	3,495
Ballinakill	892	457	260	2,832	1,492	885	10,240	7,236	3,027
Bangor	580	621	681	1,841	1,887	2,282	6,658	9,152	7,802
Ballina	594	2,289	722	2,020	7,954	2,786	7,306	88,577	9,529
Sligo	538	543	700	1,766	1,743	2,511	6,386	8,454	8,588
Ballyshannon	100	411	665	406	1,193	2,295	1,468	5,786	7,869
Letterkenny	1,259	991	881	4,282	3,205	3,118	15,486	15,544	10,666
Dundalk	34	65	46	116	282	188	418	1,373	683
Drogheda	198	195	85	808	637	353	2,923	3,089	1,243
TOTALS	11,351	11,759	8,621	39,836	39,719	31,425	144,058	242,642	107,352

## APPENDIX No. 17

Number, Quantity and Value of Sea Trout taken by Single Rod and Line in 1978, 1979 and 1980 by Fishery Districts.

Fishery Districts	No. of Fish			Quantity			Value		
	1980	1979	1978	1980 kg	1979 kg	1978 kg	1980 IR£	1979 IR£	1978 IR£
Du Blin	891	480	286	830	531	328	2,905	1,328	656
Wexford	994	560	1,080	865	381	968	3,027	953	1,936
Waterford	350	150	700	305	68	680	1,068	170	1,360
Lismore	378	420	2,080	265	143	2,968	928	358	5,936
Cork	1,523	800	1,735	1,187	544	2,365	4,154	1,360	4,730
Kerry	1,640	2,677	3,795	916	3,643	4,982	3,206	9,108	9,964
Limerick	786	550	438	719	374	656	2,517	935	1,312
Galway	827	100	446	381	91	688	1,334	228	1,376
Connemara	10,150	11,656	9,879	3,501	3,974	12,468	12,253	9,935	24,936
Ballinakill	786	565	3,684	684	513	3,987	2,394	1,283	7,974
Bangor	2,125	1,900	1,948	1,848	1,724	2,878	6,468	4,310	5,756
Ballina	563	986	565	619	739	756	2,166	1,848	1,512
Sligo	215	796	265	187	596	305	655	1,490	610
Ballyshannon	1,496	836	283	1,301	569	212	4,553	1,423	424
Letterkenny	2,096	750	583	1,823	510	686	6,380	1,275	1,372
Dundalk	1,048	680	1,020	912	540	986	3,192	1,350	1,972
Drogheda	2,065	900	700	1,796	714	645	6,286	1,785	1,290
TOTALS	27,933	24,806	29,487	18,139	15,654	36,558	63,486	39,139	73,116

## APPENDIX No. 18

PARTICULARS OF RECEIPTS AND EXPENDITURE BY BOARDS OF CONSERVATORS IN THE YEAR ENDED 30th SEPTEMBER, 1980.

Fishery Districts	Opening Balance	RECEIPTS					EXPENDITURE			Total Expenditure	Closing Balance
		Licence Duty	Fishery Rate	Grant from Department	Misc. Receipts	Total Receipts	Wages	Legal Costs	Travelling and Misc.		
	IR£	IR£	IR£	IR£	IR£	IR£	IR£	IR£	IR£	IR£	IR£
Dundalk	-2,441	3,230	1,037	44,306	374	48,947	35,548	400	12,948	48,896	-2,390
Drogheda	+12,138	4,160	4,137	68,693	832	77,822	47,986	3,600	31,408	82,994	+6,966
Dublin	+1,639	8,082	507	52,719	5,208	66,516	40,451	1,633	25,120	67,204	+951
Wexford	+6,805	7,102	5,425	24,331	1,272	38,130	33,312	3	10,872	44,187	+748
Waterford	+915	18,973	4,902	112,476	6,464	142,815	97,104	-	67,014	164,118	-20,388
Lismore	-5,957	8,987	11,410	79,850	559	100,806	64,607	4,290	15,564	84,461	+10,388
Cork	+7,868	13,553	2,022	85,202	7,534	108,311	72,772	6,328	42,784	121,884	-5,705
Kerry	-	12,924	9,521	159,207	2,274	183,926	112,633	54,685	8,938	176,256	+7,670
Limerick	-772	20,633	11,877	99,694	6,094	138,298	92,396	3,759	42,847	139,002	-1,476
Galway	+22,716	8,798	12,112	53,818	66,588	141,316	50,012	1,010	108,375	159,397	+4,635
Connemara	-1,632	3,170	11,610	17,561	1,302	33,643	26,918	3,826	1,314	32,058	-47
Ballinakill	+946	5,679	2,625	26,399	1,242	35,945	29,320	-	6,188	35,508	+1,383
Bangor	-1,416	6,493	5,065	34,534	7,766	53,858	39,710	4,345	13,365	57,420	-4,978
Ballina	+2,589	12,850	10,626	42,000	3,928	69,404	65,433	2,560	12,545	80,538	-8,545
Sligo	-3,655	3,366	4,143	35,798	1,800	45,107	27,801	939	9,442	38,182	+3,270
Ballyshannon	-	8,782	617	59,082	205	68,686	42,947	18	16,680	59,645	+9,041
Letterkenny	-16,314	18,238	7,873	111,000	1,130	138,241	83,781	130	32,131	116,042	+5,885
TOTALS	+23,429	165,020	105,509	1,106,670	114,572	1,491,771	962,731	87,526	457,535	1,507,792	+7,408

# APPENDIX NO. 19

## PARTICULARS OF LICENCES ISSUED BY BOARDS OF CONSERVATORS FOR THE YEAR 1980

Fishery District	Annual (all districts)	Annual (districts of issue only)	Late Season (all districts)	Twenty-one day (all districts)	Seven Day (all districts)	Late Season (district of issue)	Foye Area (one district)	Foye Area (all districts)	Special (Tidal Waters)	Drift Net	Drift Net	Pole Net	Bag Net	Stake Net	Head Weir	Box or Crib	Loop Net	Snap Net	Cap, eye or Basket for eels	Longline for eels	Oyster Dredge	Eel Trap	Fyke Net
Dundalk	110	81	18	-	0	119	0	0	-	37	-	-	-	-	-	-	-	-	19	1	-	-	-
Drogheda	150	198	25	0	0	142	-	-	-	41	-	-	-	-	-	5	-	-	20	20	-	20	3
Dublin	550	87	77	9	37	17	-	38	-	8	15	-	-	-	-	-	-	-	-	-	-	-	10
Wexford	124	384	-	-	86	429	-	-	-	76	-	-	-	-	-	-	-	-	-	-	-	-	-
Waterford	212	1,194	2	-	27	28	-	-	-	7	171	-	1	2	1	1	-	127	20	-	-	-	-
Lismore	109	335	0	7	275	0	-	-	-	8	101	-	1	2	-	0	-	9	-	-	-	0	-
Cork	256	454	35	-	76	106	-	-	-	34	132	-	1	-	-	-	-	-	-	-	-	-	-
Kerry	185	476	7	-	508	242	-	-	-	75	9	-	1	-	-	1	-	-	80	7	106	-	-
Limerick	256	1,449	33	-	76	254	-	-	-	114	78	-	-	0	-	0	-	-	32	3	97	5	-
Galway	143	136	71	33	81	61	-	-	-	5	36	-	-	-	-	0	-	-	-	-	25	0	-
Connemara	5	15	3	0	118	134	-	-	-	-	30	-	-	-	-	-	-	-	-	-	52	0	-
Ballinakill	40	107	19	0	302	124	-	-	-	16	44	-	-	-	-	-	-	-	-	-	112	2	-
Bangor	56	114	7	10	177	89	-	-	-	25	11	24	2	-	-	7	-	-	10	7	-	-	-
Ballina	105	651	19	-	454	391	0	1	-	10	104	-	-	-	-	-	-	-	1	4	-	-	-
Sligo	98	252	14	5	37	64	-	-	-	3	10	-	2	-	-	-	-	-	5	18	-	-	-
Ballyshannon	125	397	11	1	441	205	10	-	-	0	95	30	-	-	-	0	-	-	-	-	-	-	-
Letterkenny	82	694	32	-	101	595	109	11	-	37	13	61	175	-	-	2	31	-	-	-	-	-	0
TOTALS	2,606	7,024	373	65	2,796	3,000	119	50	46	38	601	959	7	4	1	16	31	136	187	60	392	27	13

- indicates that the type of licence is not issued to the Board  
 0 indicates that the licences were issued to the board but not sold.

## APPENDIX No. 20

## Licence Duties Payable on Fishing Engines.

	IR£
On each Salmon Rod – Annual (valid all districts) . . . . .	10.00
Do. Salmon Rod – Late Season (valid all districts) . . . . .	7.00
Do. Salmon Rod – Twenty-one day (valid all districts) . . . . .	5.00
Do. Salmon Rod – Seven day (valid all districts) . . . . .	3.00
Do. Salmon Rod – Annual (valid district of issue only) . . . . .	5.00
Do. Salmon Rod – Late Season (valid district of issue only) . . . . .	3.00
Do. Salmon Rod – Foyle area extension (valid all districts) . . . . .	7.00
Do. Salmon Rod – Foyle area extension (valid district of issue only) . . . . .	2.00
On each Draft net . . . . .	30.00
Do. Drift net . . . . .	50.00
Do. Snap net . . . . .	12.00
Do. Bag net . . . . .	30.00
Do. Stake net . . . . .	50.00
Do. Head Weir . . . . .	10.00
Do. Box or Crib . . . . .	20.00
Do. Pole net . . . . .	5.00
Do. Loop net . . . . .	2.00
Do. Gap, Eye, Basket or Coghill Net for Eels . . . . .	10.00
Do. Long line for Eels . . . . .	10.00
Do. Eel trap as used in Drogheda and Ballyshannon Districts . . . . .	20.00
Do. Oyster fishing engines . . . . .	15.00

## Licence Duties Payable on Fishing Engines other than those mentioned above

Fishery District	Fyke Net (provisional rates)	Eel Trap	Special Local Licences	
			Rod**	Draft Net
	IR£	IR£	IR£	IR£
1. Dublin	0.25	—	—	—
2. Wexford	0.25	20.00	—	—
3. Waterford	0.25	—	—	—
7. Kerry	0.25	—	—	—
9.1 Galway	2.00	20.00	—	—
10.2 Bangor	—	—	55.00	§ 40.00
13. Ballyshannon	—	—	*5.00	*40.00
14.1 Letterkenny	—	—	+5.00	‡40.00
			+	‡40.00
17.1 Drogheda	—	20.00	—	—
17.2 Dundalk	—	20.00	—	—

+ River Lackagh Tidal Water

† River Owenea/Owentocker Tidal Waters

\* River Erne Tidal Waters

§ Owenmore/Owenduff Tidal Waters

Recommended price for Fyke Nets is 25p each or a net of 20 for IR£5.

Special Local Rod Licences \*\* may be reduced to IR£4 for holders of annual (ordinary) or annual (district) licences.



## APPENDIX NO. 21

## PARTICULARS OF PUBLIC ENQUIRIES HELD DURING 1980

Date of Enquiry	Where held	Subject Matter	Decision on Report of Enquiry
13th March 1980	The Beara Bay Hotel, Castletownbere, Co. Cork.	Application by the Castletownbere Fishermen's Co-Operative Society Limited Castletownbere, Co. Cork for an Oyster Fishery Order in respect of parts of Bearhaven and Adrigole Harbours, Co. Cork.	Order granted
14th March 1980	The Beara Bay Hotel, Castletownbere, Co. Cork.	Application by Mr. John J. Sullivan, 14 Ballinakilla, Bere Island, Co. Cork for an Oyster Fishery Order in respect of part of Bear Haven - Sheep Islands Area, Co. Cork.	Order granted
15th May 1980	The Local Community Centre, Lauragh, Co. Kerry.	Application by St. Killian's Co-operative Development Society Limited, Lauragh, Killarney, Co. Kerry for an Oyster Fishery Order in respect of parts of Kilmakilloge Harbour, Co. Kerry.	Under consideration
16th May 1980	The Courthouse Midleton, Co. Cork.	Application by Mr. Cornelius Brosnan, 7, Roseneath Villas, Military Hill, Cork for an Oyster Fishery Order in respect of part of Cork Harbour.	Order granted
5th June 1980	The Keane County Hotel, Old Cork Rd., Midleton, Co. Cork.	Application by Cork Seafoods Limited, 3, Lynch's Quay, Cobh, Co. Cork for an Oyster Fishery Order in respect of part of Cork Harbour.	Order granted
6th June 1980	The Courthouse, Bantry, Co. Cork.	Application by the Glengarriff Fish Farming Co-operative Society Limited for an Oyster Fishery Order in respect of part of Glengarriff Harbour, Co. Cork.	Order granted
14th July 1980	Council Chambers, Ashe Memorial Hall, Tralee, Co. Kerry.	Application by the Tralee Oyster Fisheries Society Limited, Ashe Memorial Hall, Tralee, Co Kerry for an Oyster Fishery Order in respect of parts of Brandon Bay, Tralee Bay and Ballyheige Bay, Co. Kerry.	Order granted

## APPENDIX No. 21 (contd.)

Date of Enquiry	Where held	Subject Matter	Decision on Report of Enquiry
17th July 1980	The Courthouse, Clifden, Co. Galway.	Application by Mr. Leo John Whelan, Castlemarina Seaview, Clifden, Co. Galway for an Oyster Fishery Order in respect of part of Clifden Bay, Co. Galway.	Order granted
21st October 1980	The Fisherman's Hall, Baltimore, Co. Cork.	Application by Baltimore Fishermen's Co-operative Society Limited, Turk Head, Church Cross, Skibbereen, Co. Cork for an Oyster Fishery Order in respect of parts of Churchstrand Bay in Baltimore Harbour, Co. Cork.	Under consideration
23rd October 1980	The Courthouse, Achill Sound, Co. Mayo.	Application by Mr. Michael G. Kilbane, Ocean View, Dooagh, Achill, Co. Mayo for an Oyster Fishery Order in respect of part of Blacksod Bay, Co. Mayo.	Under consideration
28th, 29th and 30th October, 1980	Town Hall, Killarney, Co. Kerry.	To consider the justification of the Bye-laws prohibiting fishing for salmon with drift nets in the tidal waters of the Kerry Fishery District between Crow Head, Co. Cork and Dunmore Head (including the Blaskets) Co. Kerry and around any islands and rocks off the coast between the said points.	Under consideration (at 31st December, 1980)

## APPENDIX NO. 22

## ABSTRACT OF STATUTORY INSTRUMENTS MADE IN 1980

## SEA FISHERIES

- (1) Sea Fisheries (Conservation and Rational Exploitation) Revocation Order, 1980. (S.I. No. 47 of 1980) dated 21st February, 1980 revokes the Sea Fisheries (Conservation and Rational Exploitation) Order, 1977 (S.I. No. 38 of 1977) and the Sea Fisheries (Conservation and Rational Exploitation) (No. 2) Order, 1977 (S.I. No. 39 of 1977).
- (2) Agricultural and Fishery products (Regulation of Export to Southern Rhodesia) (Revocation) (No. 2) Order, 1980. (S.I. No. 69 of 1980) dated 5th March, 1980 lifts the prohibition on the export to Southern Rhodesia of all fishery products coming within the scope of export control legislation administered by the Minister for Fisheries and Forestry.
- (3) Undersized Sea Fish (Lobsters) Order, 1980 (S.I. No. 299 of 1980) dated 29th September, 1980 increases the minimum legal size for lobsters from 83mm as specified in the Undersized Sea-Fish (Lobsters) Order, 1963 (S.I. No. 52 of 1963) to 85mm with effect from 1st January, 1981.
- (4) Mackerel Fishing (Licensing) Order, 1980 (S.I. No. 326 of 1980) dated 28th October, 1980 prohibits fishing for mackerel within the exclusive fishing limits of the State by vessels exceeding 55 feet in registered length during the specified period except under licence issued by the Minister for Fisheries and Forestry.
- (5) Undersized Sea-Fish Order, 1980 (S.I. No. 341 of 1980) dated 12th November, 1980 amends the Undersized Sea-Fish Order, 1978 to provide for a minimum length of 27 centimetres for whiting (all areas) and 45 centimetres for cod taken in the Irish Sea (International Council for the Exploration of the Sea, Statistical Area VIIA).
- (6) Sea Fisheries (Conservation and Rational Exploitation) Order, 1980 (S.I. No. 404 of 1980) dated 23 December, 1980 extends the period of application of the ban on direct herring fishing off the north-west coast as imposed by the Sea Fisheries (Conservation and Rational Exploitation) (No. 3) Order, 1978 (S.I. no. 187 of 1978) as amended, up to and including 31 January 1981 as well as the ban on having herring on board a sea-fishing vessel within the defined area.

## OYSTER FISHERY ORDERS, 1980

- (1) Oyster Fishery (Poulnaclogh Bay and Pouldoody Bay) Order, 1980 dated 20th April, 1980 grants to Mr. Sean Tyrrell, Caretaker's Residence, University Research Station, Carron, Co. Clare certain exclusive rights within the limits of the oyster fishery described in the schedule to the Order.
- (2) Oyster Fishery (Roaringwater Bay) (No. 2) and (No. 3) Orders 1980 dated 27th May, 1980 grant to Roaringwater Limited of "Dunmuire",

Woodview, Douglas Road, Co. Cork, certain exclusive rights within the limits of the oyster fishery described in the schedules to the Orders.

- (3) Oyster Fishery (Donegal Harbour) and (Donegal Harbour) (No. 2) Orders, 1980 dated 28th July 1980 grant to Donegal Shellfish Company Limited, The Cannons Ballintra, Co. Donegal, certain exclusive rights within the limits of the oyster fishery described in the schedules to the Orders.
- (4) Oyster Fishery (Ardbear Bay) Order, 1980 dated 22nd October, 1980 grants to Ardbear Sea Farms Limited, Ceol na Mara, Faul, Clifden, Co. Galway certain exclusive rights within the limits of the oyster fishery described in the schedule to the Order.
- (5) Oyster Fishery (Cork Harbour) Order, 1980 dated 4th November 1980 grants to Mr. Cornelius Brosnan of 2 Wellesley Terrace, Wellington Rd., Co. Cork certain exclusive rights within the limits of the oyster fishery described in the schedule to the Order.
- (6) Oyster Fishery (Brandon Bay) Order, 1980 dated 5th November, 1980 grants to Comharchumann Forbartha an Leith Triuigh Teoranta, of Baile Uí Dhuibhne, Breanann, Trá-Lí, Co. Chiarrai certain exclusive rights within the limits of the oyster fishery described in the schedule to the Order.

#### INLAND FISHERIES

- (1) Bangor District Bye-Law No. 611, 1980, dated 21 March, 1980, prohibits drift netting for salmon in the tidal waters of the rivers Owenmore and Owenduff and also all commercial fishing for salmon in specified portions of these tidal waters.
- (2) Salmon and Trout Conservation (Amendment) Bye-Law No. 612, 1980, dated 20 March, 1980, alters the weekly periods (in addition to the weekly close time) during which fishing other than by rod and line for salmon or trout is prohibited.
- (3) Ballyshannon District Bye-Law No. 613, 1980, dated 21 March, 1980, prohibits commercial fishing for salmon or trout in the tidal waters of the River Erne, or its tributary, the Abbey River.
- (4) Salmon Levy Order, 1980 (S.I. No. 141 of 1980), dated 20 May, 1980, provides for the payment of a levy on every first or only sale of salmon (including sea trout).
- (5) Salmon Levy, Licensed Salmon Dealers' Registers and Salmon and Trout Records, Regulations, 1980 (S.I. No. 142 of 1980), dated 20 May, 1980,
  - (a) specifies the rate of salmon levy to be paid on the first or only sale of salmon (including sea trout). The rate is ten per cent of the price fetched by the salmon or sea trout,
  - (b) makes provision for the payment of the levy to the Minister for Fisheries and Forestry and for the forwarding of returns

- concerning the levy to both the Minister and the appropriate fishery board,
- (c) provides that records kept for the purposes of the levy may be inspected by an officer of the Minister, by a member of the Garda Síochána or by Inspectors appointed under Part X of the Fisheries Acts,
  - (d) prescribes the manner in which records required for the purposes of the levy are to be kept,
  - (e) repeals the Fisheries Act, 1925 (Regulations) Order, 1951 (S.I. No. 199 of 1951), which prescribes the form of the register kept by licensed salmon dealers.
- (6) Sales of Salmon (Attributable Price), Regulations, 1980 (S.I. No. 143 of 1980), dated 20 May, 1980, fixes the price attributable (for the purpose of assessment of salmon levy) to every first or only sale of salmon in the case of sales where the purchaser (on the first or only sale) is a purchaser outside the State.
- (7) Limerick District Bye-Law No. 614, 1980, dated 23 June, 1980, reduces the minimum size limit of trout that may be taken:—
- (a) to 30 centimetres (11.82 inches) in Loughs Sheelin, Derravaragh, Ennel and Owel, and
  - (b) to 25 centimetres (9.85 inches) in the parts of the River Inny between Lough Sheelin and Lough Rea,
- and revokes the Limerick District Bye-Law No. 548 of 1969.
- (8) Salmon and Trout Conservation Bye-Law No. 615, 1980, dated 18 July, 1980, defers the commencement dates of the annual close season for commercial fishing for salmon and trout:—
- (a) to 6 a.m. on 25 July in the Cork, Kerry, Limerick, Galway, Connemara, Ballinakill, Bangor, Ballina, Sligo, Ballyshannon and Letterkenny Fishery Districts except those areas where the annual close season commences on any date earlier than 20 July, and
  - (b) to 6 a.m. on 1 August in the Lismore and Waterford Fishery District, and defers the commencement of the annual close season for angling for salmon throughout the country to 8 September except in parts of the Wexford, Waterford and Dundalk Fishery Districts where the annual close season for angling for salmon commences on any date earlier than 8 September.
- (9) Fisheries Act, 1980 (Appointed Day) Order, 1980 (S.I. No. 323 of 1980), dated 22 October, 1980, appoints the 29th October, 1980, as the appointed day for the purposes of the Fisheries Act, 1980. On that day certain sections of the Fisheries Act, 1980 come into operation.
- (10) Fisheries Regions Order, 1980, (S.I. No. 324 of 1980), dated 22 October, 1980,
- (a) creates seven Fisheries Regions and specifies the geographical area and the name of each region,
  - (b) establishes a regional fisheries board for each fisheries region and specifies the name of the board and the number of members on the board,
  - (c) specifies:—
    - (i) the classes of electorate for elections to regional fisheries

- boards, and
  - (ii) the number of members to be elected to each regional board by each class of electorate,
  - (d) provides for the transfer of the properties of boards of conservators to the appropriate regional fisheries boards, and
  - (e) provides that any legal proceedings, contracts or debts instituted, entered into or incurred by a board of conservators shall become the responsibility of the appropriate regional board.
- (11) Ballina District Bye-Law No. 616, 1980, dated 25 October, 1980, prohibits angling for salmon (including sea trout) from 1 February to 16 April in each year in a specified part of the river Moy viz. between the Upper Bridge (otherwise known as Ham Bridge) in the town of Ballina and a straightline drawn from the most north-westerly point of Bartragh Island in Killala Bay in a south-easterly direction to the mouth of the Bellawaddy river in County Sligo.  
The prohibition laid down in this Bye-Law is the same as that laid down in article 3 of Bye-Law No. 608 of 1979. It was necessary to make this new Bye-Law; the county was incorrectly given as Mayo in the original.
- (12) Control of Fishing for Salmon Order, 1980 (S.I. No. 360 of 1980) dated 28 November, 1980, regulates the issue of salmon fishing licences for fishing engines, other than rod and line, for use in public and private fisheries. The Order, which replaces the Control of Fishing for Salmon Order, 1977, authorises the issue of commercial salmon fishing licences by Regional Fisheries Boards and prescribes the criteria under which those licences may be issued. The Order prescribes also revised maximum numbers of commercial salmon licences which may be issued by Regional Boards.
- (13) Fisheries Act, 1980 (Section 69) (Commencement) Order, 1980 (S.I. No. 414 of 1980), dated 23 December, 1980, brings section 69 of the Fisheries Act, 1980 into force on 1 January 1981. Section 69 provides for an increase from IR£1 to IR£25 in the fees payable for a Salmon Dealer's Licence and for a Salmon Exporter's Licence.

#### FOYLE AREA

Foyle Area (Licensing of Fishing Engines) (Amendment) Regulations, 1980 dated 22 January, 1980, increase the licence duties payable in respect of each type of net used, and game fishing licence issued, in the Foyle Area.

## APPENDIX No. 23

## OUTPUT AND DISPOSAL OF FISH HATCHERY PRODUCE 1979/80

Hatchery	Output (Ova)			Disposal (000)	River System Stocked
	Salmon (000)	Sea Trout (000)	Brown Trout (000)		
Fanure (Roscrea)		—	515	250 Fry 64 Summerlings 127 Fingerlings 12 Spring Yearlings  34 Autumn Yearlings 46 Spring 2 Year Olds 4 Adults	Various Trust waters in Cos. Cavan, West- meath, Longford, Ros- common and Mayo and Angling interests.
Cullion (Mullingar)		—	700	594 Fry 198 Summerlings 183 Fingerlings 118 Spring Yearlings 46 Autumn Yearlings 61 Spring 2 Year Olds 5 Adults	Various Trust waters in Cos. Cavan, West- meath, Longford, Ros- common and Mayo and Angling Interests.
Lough Carra cages (Co. Mayo)		—	—	12 Autumn Yearlings	
Carriga- drohid	964	—	—	357 Ova Remainder retained	Cork Rivers
Parteen	1,419	—	—	120 Ova Remainder retained	Shannon and Tributaries
Screebe	40	65		105 Ova	Screebe system only
Cong	159	—		44 Ova	Not yet released.
Glenties	42	—		42 Ova	All disposed in Owenea River System
S.R.T.	392	33		50 Salmon ova and 33 Sea-trout ova 30 Salmon ova 100 " " 50 " " 20 " " 35 " " 37 " " 30 " " 20 " " 20 " "	Retained for on-rearing  Glenamoy River Dawros River Erriff River Ramelton Fish Farms Dingle Fish Farms Sneem River Letterkenny Anglers Buncrana Anglers Gweebarra Fisher- men's Association
Carrowmore Lake	24	—		22 Ova	Owenmore System



## APPENDIX No. 23 (contd.)

Hatchery	Output (Ova)			Disposal (000)	River System Stocked
	Salmon (000)	Sea Trout (000)	Brown Trout (000)		
Waterville	70	—		55 Ova 10 Ova	Comeragh, Inny, Finnaglosh Rivers Retained
Inistioge	150	—		70 Ova 80 Ova	River Clodiagh Griere Lerr, Mountain River, Fishogue
Mallow	163	—		100 Ova	River Blackwater
Virginia	360	—		30 Ova 20 Ova 14 Ova 10 Ova 10 Ova 10 Ova 105 Ova	Stoneyford River ) Tremblestown River ) Lismullen ) Knightsbrook ) Boyne Deel ) Boycetown ) Retained )

## APPENDIX No. 24

## SCIENTIFIC AND OTHER PAPERS

## DEPARTMENTAL

## A. IRISH FISHERIES INVESTIGATIONS

Series A (Freshwater) No. 18. Edward Fahy.

Sea Trout from the tidal waters of the River Moy.

Series B (Marine) No. 18. B. Ottway, M. Parker, D. McGrath and M. Crowley. Observations on a bloom of *Gyrodinium Aureolum* Hulbert on the South Coast of Ireland, Summer 1976, associated with mortalities of littoral and sub-littoral organisms..

Series B (Marine) No. 19 Edward Fahy.

The exploitation of Grey Mullet (*Chelon Labrosus*) (Risso) in the south east of Ireland.

Series B (Marine) No. 20. A. B. West, J.K. Partridge and A. Lovett.

The Cockle *Cerastoderma edule* (L) on the South Bull, Dublin Bay: population parameters and fishery potential.

Series B (Marine) No. 21. A. J. Elliot

Laboratory Investigations into the absorption of dissolved free amino acids by the gill of the mussel *Mytilus edulis* L.

## B. FISHERY LEAFLETS

No. 101. Edward Fahy

Performance of the Crumlin Sea-Trout Fishery, Co. Galway.

No. 102 Christopher Moriarty

Eel Research 1978 - 1979.

No. 103 J. Browne and P. Gallagher

Preliminary Investigations of the population of juvenile Salmonids in the Corrib System.

No. 104 D. T. McCarthy

Salmon movements in Galway Bay in 1978 and 1979.

No. 105 J. Molloy and T. D. Kennedy

The Donegal Mackerel Fishery.

